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NOVEMBER 1984 / $2.00

WEEDS TREES & TURF

The Magazine of Landscape and Golf Course Management Since 1962

1985 Golf Car and Turf Vehicle Guide

Snow Removal Means Full Service, Winter Cash Flow

Landscape Manager's Guide to Fine Fescues

1985 Ford walk-behind rotary with sulky.

TURFLON
D HERBICIDE
For the Control of Annual and Perennial Broadleaf Weeds in Ornamental Turf
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INTRODUCING New TURFLON* D FIRST LINE OF DEFENSE.

Stops the broadleaf invasion... ...even tough weeds like veronica, ground ivy, oxalis, wild violet, spurge. New cost-efficient weed fighter!

New TURFLON* D herbicide. Here's a post-emergence herbicide for broadleaf weeds. It's been thoroughly tested by the major universities in the Bluegrass Belt and proven under Experimental Use Permit (E.U.P.) on hundreds of lawns.

It works. It will reduce callbacks. It will make you money!

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DOW

*Trademark of The Dow Chemical Company

Circle No. 108 on Reader Inquiry Card

NOVEMBER 1984 VOLUME 23, NUMBER 11

WEEDS TREES & TURF

The Magazine of Landscape and Golf Course Management Since 1962

28 Getting Rid of the White Stuff

Most landscape managers across the country at one time of the year or another are confronted with removing snow. An up-to-date look at some of the men and machines that do it.

32 Lawn Care Market Survey

How much will the lawn care business grow? Has it peaked yet? Where are the greatest expenditures? What are some secrets of managing a successful lawn care operation? Our survey answers these questions and more.

38 Gentleman Jim

Jim Marria is president and owner of one of the largest lawn care companies in Idaho. His business has branched out into other states. Where did this million-dollar company have its beginnings? In Marria's garage.

40 Ever-Green's Gold

Colorado's largest lawn care company thrives on its owner's penchant for hard work and quality.

28 Guide to Fine Fescues

C.R. Skogley of the University of Rhode Island explains the diversity of this often overlooked and under-utilized grass.

58 Turf Vehicle Guide

Sales of turf vehicles are being spurred by a healthier market and a demand for luxury vehicles.

DEPARTMENTS

6 Trends
13 Green Industry News
24 Government Update
80 Problem Solver
82 New Products
94 Events
96 Classifieds
97 Advertisers Index
98 Outlook

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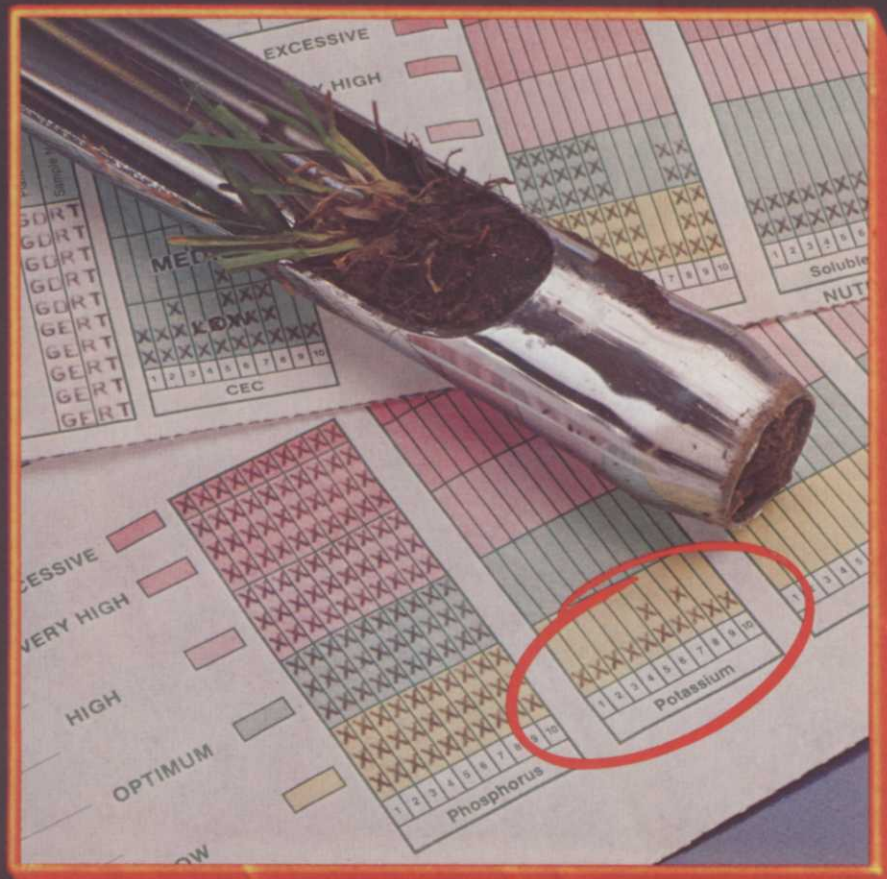

Improved tolerance of drought, temperature variations and wear are only some of the advantages from potassium fertilization. For more information about High K Fertilizer or Scotts exclusive soil analysis, call your local ProTurf® Tech Rep.

Scotts ProTurf

Quality Potassium Fertilizer for Turf

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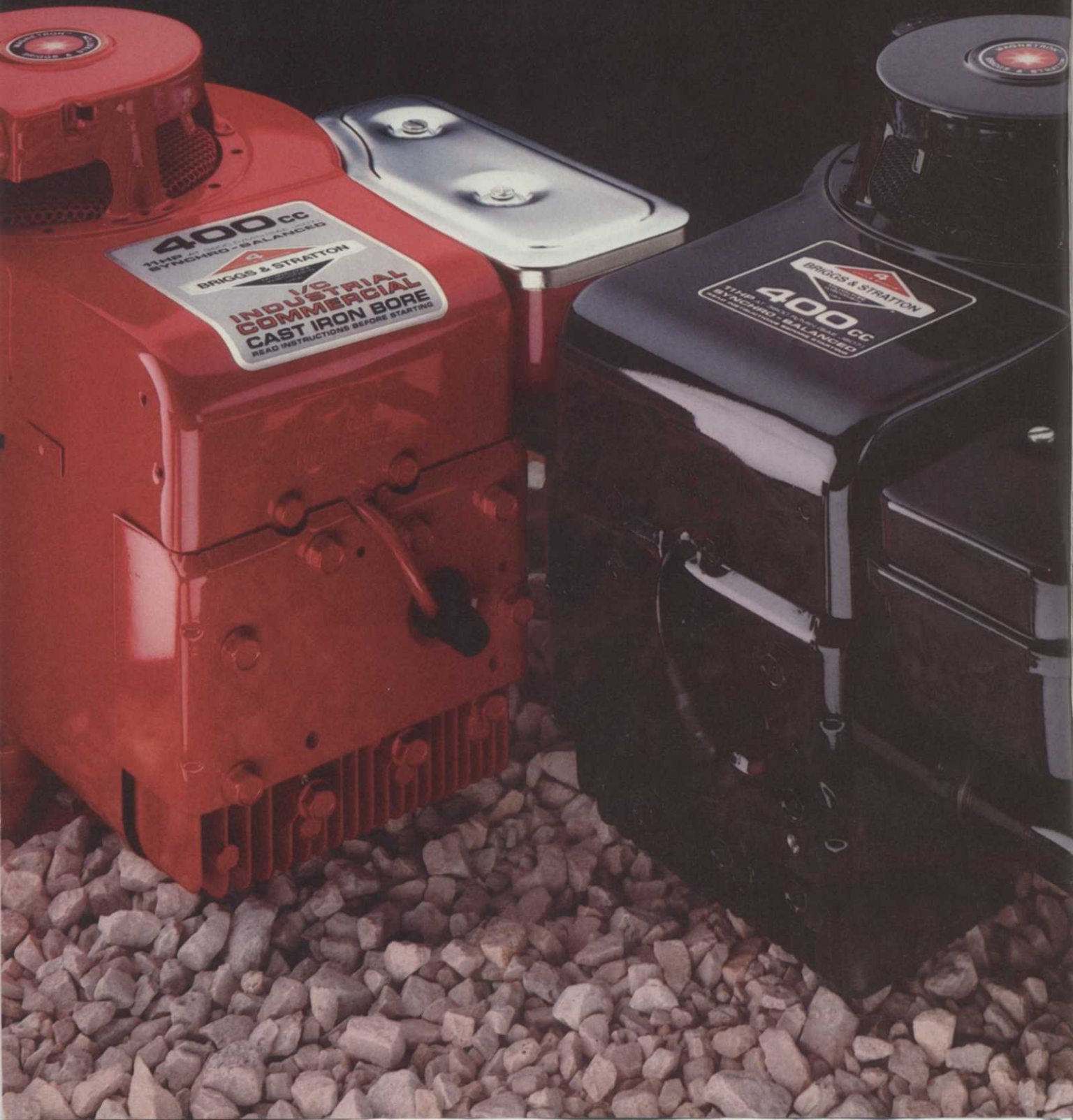
WE HAVE TWO.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400 cc

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Our standard 400 cc (11 hp) engine has stood alone as the most popular lawn and garden tractor engine for several years. For several reasons.

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By **Bruce F. Shank**, executive editor

Demand, imports, deregulation create fertilizer price speculation

The price of fertilizer may roller coaster for the next two to three years according to industry analysts. Large fertilizer users, who have enjoyed stable urea prices for nearly ten years, are planning for increases.

The U.S. Department of Agriculture reports demand has increased more than 200% for nitrogen and more than 65% for potash since 1970. Increased demand for fertilizer has been met largely by importing urea from countries where natural gas prices are cheaper and a strong dollar favors U.S. buyers.

Natural gas is a major component in urea manufacturing. To balance trade the U.S. has now deregulated natural gas. In a story in *Fertilizer Progress*, The Andersons Sid Muse said imports will continue to put downward pressure on U.S. fertilizer prices. He added deregulation will cause an initial price increase in fertilizer, then overproduction will lower prices within two to three years.

No one has put a figure on the initial increase to be caused by deregulation, but a ChemLawn spokesman used the term "drastic." Higher fertilizer prices will force lawn care companies, sod producers, and nurserymen to raise prices. They will also encourage development of nitrification inhibitors.

Fungigation of greens promising

Where there are greens there is disease. Dr. Phil Larsen, turf pathologist at Ohio State University, thinks he has a better idea to prevent disease damage of golf greens. He has coined the term fungigation for his system under testing at OSU and on an Ohio state park golf course.

The process entails injecting fungicides into the irrigation system at each green. "It's impractical to inject fungicides at the pump letting water push them all over the course," said Larsen as he wrapped up his last field day before moving to the University of Minnesota in 1985. "This way you use only the fungicides you need where you need them. When perfected, the superintendent will be able to quickly attach a container of fungicide to an injector at the side of the green and let the program run as normal."

Pumping iron gets results

More and more lawn care companies are including iron in their program to boost the color impact of their service to customers. Soil tests might show adequate iron but soil pH and other elements can make it unavailable. Adding the iron to the program gives a dramatic dark green color to the turf and nets positive results from customers.

WT&T

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The surest way to cut mowing costs is to make sure no one cuts corners at the factory.

These features all add up to a better cut and lower costs:

Differential lock helps prevent wheel spinning.

Mowing deck raises 8 inches to mount high curbs.

"Floating deck" helps cut contours without scalping.

Wide cutting path takes on the big jobs.

Maneuverability to reach tight cutting areas.

Lower deck clearance to cut under fences.

Control panel that's easy to reach while riding.

Hydrostatic power steering for fingertip control.

Pop-up hood for easy access and maintenance.

Clean air intake system to keep engine running cool.

Welded steel frame for extra durability.

John Deere Presents

THE FRONT

All the newest ideas in commercial mowing... backed by one of the oldest traditions in engineering.

The F930 and F910 Front Mowers. Two of the surest ways to get better mowing productivity while you save time and money. Built with all the newest ideas, these front mowers maneuver under shrubbery and fence rails, climb over curbs, cut up, down and around hills, handle dips and bumps, and mow down the flatout straightaway.

And with John Deere's tremendous reputation for dealer service and durability, your front mower will continue to cut in all those places for years to come.

Hydrostatic power steering eliminates troublesome mechanical linkage and makes tight turns easy—getting you in and out in a hurry.

Dual hydraulic lift cylinders allow the mowing deck to tilt and float up to 12 inches over rough terrain to avoid turf gouging or scalping.

The mowing deck raises 8 inches to clear most curbs without the need for a ramp or driveway.

MOWERS.

Driver's area is designed for comfort and efficiency—with a high-back driver's seat and two-position footrest to reduce fatigue, and easy-to-reach controls while you ride.

Efficient clean-air intake cooling system protects the 24-hp Onan engine from overheating and clogging with dirt, dust and clippings—so it runs cooler and lasts longer.

Differential lock on the F930 distributes power evenly to prevent wheel-spinning slippage on slopes and provides better straight-line traction—especially on wet grass.

The 20-hp F910 gives you the same great maneuverability for smaller turf-maintenance jobs.

Options and dealers that make them work harder while they're lasting longer.

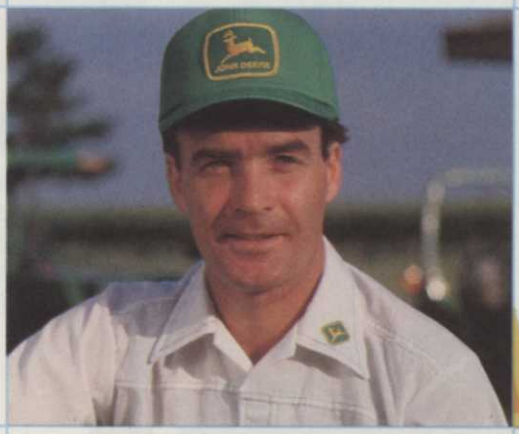
Single-stage snow thrower with 12-inch auger and shear pin protection.

Front-mounted blade for light grading, leveling and snow removal jobs.

Hydraulic-suspension custom seat with armrests—anatomically designed for operator comfort.

Durable front-mounted 50-inch (F910), 60-inch (F910 and F930) and 72-inch (F930) mowing decks take on any size job you've got.

Roll-over protection system for operator safety.



Fully-enclosed, easily mountable cab with large glass area and two-door access.

Owning a John Deere front mower also means complete service is always nearby. Even the most hard-to-get parts are just hours—not weeks—away, thanks to our unique FLASH™ computerized parts system.

See how owning a John Deere front mower can cut your high cost of mowing. For the dealer nearest you, call toll-free 800-447-9126 (Illinois 800-322-6796), or write John Deere, Dept. 75, Moline, Illinois 61265.

Circle No. 107 on Reader Inquiry Card

JOHN DEERE

Nothing Runs Like a Deere®

Lawn care list pirate nabbed in St. Louis

The first major reported scam of trying to sell a customer list from a competing lawn care company came to a screeching halt one recent sultry July afternoon in a St. Louis shopping center parking lot.

There, a check for $10,000, a taped telephone conversation, a gun and a pair of handcuffs spelled the demise of one St. Louis lawn care company employee trying to make a quick buck.

The thought of "easy money" spelled the beginning of the end for "John Doe". Thinking he could cut a deal with a competitor after pirating a large lawn care company customer list, he called Mark Wilson of Lawn Groomer, also in St. Louis, and offered to sell 10,000 names at $1 each.

After getting the shady offer, Wilson immediately called his boss, Steve Derrick, in Normal, IL. They decided the best course of action was to first determine where the list came from. Then, they planned their strategy and baited a trap.

When Doe contacted Wilson again, a deal was struck to have a sample of the list sent to Lawn Groomer. "When we got the list and saw how large it was, we knew the list had come from either Evergreen or ChemLawn," Wilson told LCI. "We gave the sample to each of them and Evergreen identified it as theirs."

Paul Davarede and Jim Oates of Evergreen and the West County (MO) Sheriff's Dept. then entered the picture. "What you had was a guy trying to sell a qualified list of prime lawn care prospects," says Davarede, whose major concern was finding the right enforcement group to work with.

Through taped telephone conversations, Evergreen City Manager Jim Oates identified the employee who had tried to sell-out. "It certainly surprised us," Oates said. "He was a production manager at one of our major branches."

Wilson notified Bob Paul of the West County Sheriff's Department that the deal would be set up with one added provision; that Wilson's boss would accompany him to the agreed upon rendezvous because the payoff cashier's check was so large.

Doe agreed and "the sting" was under way.

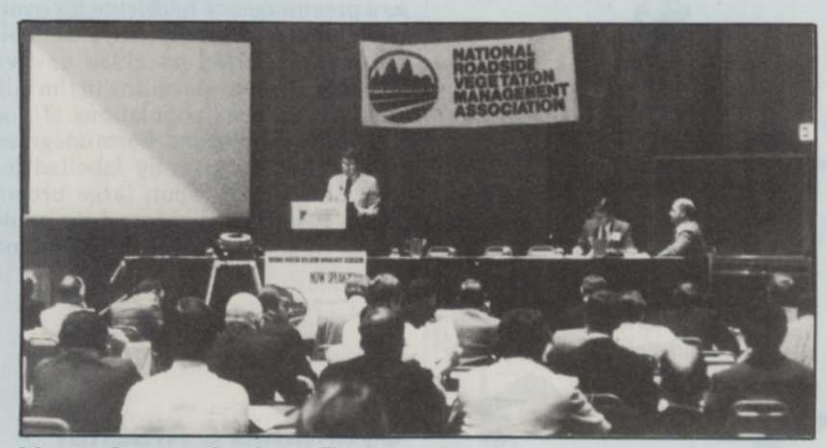
Doe told Wilson to be at a certain St. Louis shopping center parking lot at a specified time. The perpetrator was not told, however, that Wilson's "boss" would be an undercover policeman, and that there would be a half dozen other plainclothesmen blanketing the parking lot.

At the agreed-upon time, Wilson and his "boss" met and handed over the check in exchange for the list. As soon as the transaction was complete, Doe's rapid apprehension unfolded.

"The cop pulled a gun and stuck it in his head," Wilson recalls.

A few minutes later Doe's accomplice was found in a nearby car. A gun was also found in the car between the seat and door.

The former Evergreen employee has been indicted on a felony charge and was awaiting trial at presstime. *By Jerry Roche and Maureen Hrehocik.*



New Association Formed

Managers of state and federal roadside weed control programs shared their concerns at a conference in Kansas City in October. The National Roadside Vegetation Management Association was formed at the meeting that was attended by more than 200. Yearly conferences have been planned.

INDUSTRY

Deere acquires interest in Bunton

Bunton Company of Louisville and Deere & Company of Moline, IL, have reached an agreement under which Deere acquires a 20 percent interest in Bunton.

Bunton is a privately held firm that has manufactured a line of commercial turf care equipment for more than 30 years. The company is a leading manufacturer of commercial mowers in the 24 to 61-inch range. Deere and Company is the leading manufacturer of lawn and garden tractors.

Under terms of the agreement, two Deere executives have been elected to sit on Bunton's Board of Directors. They are Ronald K. Leonard, Manager, Engineering, of the John Deere Horicon Works in Wisconsin and Mark C. Rostvold, Director of Marketing, Consumer Products for Deere & Co.

Stan Byers, president of Bunton said, "We believe both companies can contribute equally to joint engineering projects. Deere's investment demonstrates the commitment of both companies to design and develop commercial mowing machines that will enhance the reputation each company enjoys for high quality."

HERBICIDES

Scott launches latest preemerg turf herbicide

O.M. Scott has received the first label for turf of American Cyanamid's pendimethalin (Prowl). Tech reps from the Marysville, OH, firm are taking orders for the new herbicide, named Turf Weedgrass Control, which controls crabgrass, goosegrass, foxtail, barnyardgrass and seven sprouting broadleaf weeds. The new product applied in late summer to early fall will prevent the emergence of annual bluegrass. Bentgrass is also sensitive to the herbicide.

Marketing manager Roger Farrington said cool-season and warm-season versions of the product will be sold. "Scotts will continue to offer

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Always First
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35 Years...
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JP420
8" Tri-Kut Weed Blade, T&P Two-line Monofilament Head standard equipment.

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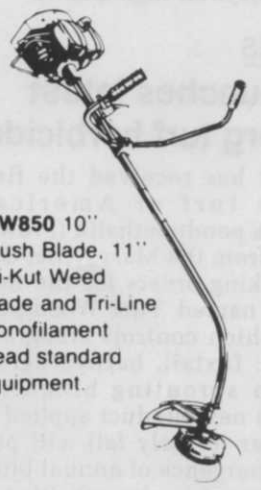
In today's market, you need a full line of gasoline powered portable clearing equipment that handles the tough jobs, the easy ones and everything in between. You need a well-engineered, quality-made product that works right and holds up. You need parts service you can depend on for years to come.

You get it all from Hoffco, the company with the strongest roots. Ready for the growing seasons ahead.



WW850 10" Brush Blade, 11" Tri-Kut Weed Blade and Tri-Line Monofilament Head standard equipment.

WT320H 8" Tri-Kut Weed Blade, T&P Two-line Monofilament Head standard equipment.

WT160HT 8" Tri-Kut Weed Blade, Automatic "tap" feed Monofilament Head standard equipment.

For further information write:

HOFFCO INC., Dept. WTT4-1184
358 N.W. "F" St., Richmond, IN 47374 Telex 20212

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products containing other preemergence herbicides as it has for years."

This is the fifth new product for Scotts recently, including a granular pythium fungicide, a fluid fungicide, a high potassium fertilizer, and a rotary spreader.

HERBICIDES

Dow's broad spectrum herbicide gets label

Turflon-D, a combination of 2,4-D and triclopyr(Garlon), is now available to turf managers from Dow distributors. The new product is effective on the primary and difficult-to-control weeds, such as oxalis, wild violet, ground ivy, spurge and veronica, in cool-season turf.

Dow says the liquid mixes well with liquid fertilizers and other turf chemicals. Product sales manager Vince Geiger says Turflon-D is 'quite immobile in soil', lessening the chance for root uptake by ornamentals and trees. It is a low volatile ester formulation with no evidence of plant damage due to volatility during tests. Application to off-target plants and drift should be prevented.

CHEMICALS

Rubigan receives label for poa control in South

Elanco has received an experimental use permit for its fungicide Rubigan as a preemergence herbicide for overseeded warm-season turf on golf courses. Applied as close as two weeks prior to overseeding in the fall, Rubigan reduces populations of *Poa annua* in overseeded Bermudagrass.

Rubigan is currently labelled for control of dollar spot, large brown patch, fusarium blight, and the snow molds in both warm-and cool-season turf.

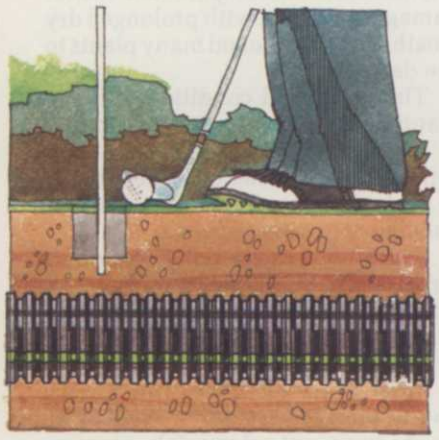
CHEMICALS

Cyanamid's Arsenal gets conditional label

American Cyanamid's Charles Galley recently sent a telegram to trade magazine editors announcing the conditional registration of Arsenal by EPA.

ADS Drainage Tubing

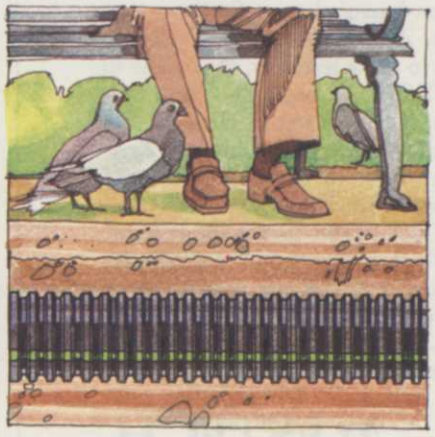
It's dependably tough for your toughest turf jobs.



Flexible ADS drains your greens.

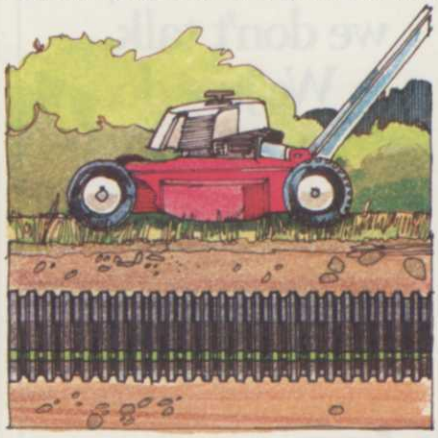
ADS helps maintain beautiful landscapes.

ADS keeps your athletic fields dry.



ADS controls water runoff in heavily trafficked areas.

Sandy soils call for ADS Drain Guard® — the nylon filter that won't block or clog.



ADS tubing — a small part of your turf care budget.

Whether you buy or sell turf care products, you want quality. That's why ADS polyethylene tubing is your best bet. For healthy soil, drainage is important. Strong and durable, ADS tubing provides years of trouble-free drainage, and helps maintain stable soil systems.

ADS is easy to install, requiring less labor and no heavy machinery. A flexible tubing, it follows ground contours and adapts to underground obstacles. And, ADS tubing won't rot, rust or break down during handling or backfilling. A full line of accessory fittings and couplings help simplify even the most challenging installations.

At a cost of just pennies per foot, ADS means quality AND value.

This season rely on ADS drainage tubing. You deserve the best.

SPECIFICATIONS

ASTM F-405, Standard Specification for Corrugated Polyethylene Tubing and Fittings. **SCS,** National Engineering Standard, Code 606. **ASTM F-667,** Standard Specification for 10", 12" and 15" Corrugated Polyethylene Tubing.

Look for the ADS green stripe

It's your sign of quality — #1 in the land.

ADS

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(614) 457-3051

For additional product and technical information, contact your nearest ADS sales office.

To serve your drainage needs, ADS operates 21 manufacturing plants nationwide, and the eight regional sales offices listed below:

Madera, CA	209-674-0903
Iowa City, IA	319-338-3689
Bellevue, WA	206-643-2770
Monticello, IL	217-762-9448
Atlanta, GA	404-393-0602
Napoleon, OH	419-599-0585
Livermore, KY	502-733-4324
Palmer, MA	413-283-9797

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Which in turn grew a lot of grain.

Which in turn fed a lot of people.

You'd think we would have shared this claim to fame before now. But that's the secret of our success...

At ESTECH, we don't talk. We just do."

Estech, Inc.

We'll share some equally revealing secrets about Professional & Commercial Fertilizers.
Call Irv Stacy, National Sales Manager, Par Ex 813/533-1181

Circle No. 111 on Reader Inquiry Card

ORNAMENTALS

Winter damaged plants remain weak into fall

The winter of 1983/84 continues to take its toll on landscape plants across the country. Ohio State University Extension Specialist Elton Smith has warned state landscapers that winter damage combined with prolonged dry weather has weakened many plants to the danger point.

The weakened condition of many plants makes them more susceptible to damage from insects, disease, and soil nutrient deficiencies. Resistance to and recovery from these normal enemies is greatly reduced.

Smith advises special attention to fertilization, mulching, and irrigation this fall, in addition to winter protection methods. Smith says plants should receive no less than one inch of water every ten days. The bottom line is the root system of weakened plants have not adequately regenerated over the summer and fall and special precautions are necessary to help them survive the stress of winter.

TURF VEHICLES

Heald kit firm sold to Bear Ind.

Don Rupley has sold his major interest in Heald Inc., a manufacturer of turf vehicle kits, to Bear Industries of Downers Grove, IL, a holding company with farm equipment related companies.

Former Mott president Mitchell Blayney, is now president of Bear. Rupley will remain president of Heald as a division of Bear. Heald will continue with design, manufacturing and packaging of vehicular kit products, but will also assemble.

LEGISLATION

3PF sues Waucanda to block model law

In the eyes of many commercial pesticide applicators a time bomb is ticking in Waucanda, IL. That city passed a law this year requiring posting of areas sprayed by commercial applicators. This particular legislation is being used as a model in hearings for local pesticide legislation across the country.

To lawn care companies and arborists, Waucanda is a ghost town since few care to operate under the ordinance. That is their decision. But,

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the Pesticide Public Policy Foundation, a lobbying organization for commercial pesticide applicators, is suing the city in an attempt to make the law an example in their favor instead of a law used to spread legislation across the U.S.

David Dietz, director of 3PF, claims Waucanda is leading the way to Federal legislation this spring. "We expect to see son of Harper's Ferry plus a lot of nieces and nephews, in Congress this spring." Harper's Ferry bill, called an environmentalist's want list, failed to pass Congress last session.

3PF is suing on three counts. First, the city overstepped its bounds since authority for pesticide legislation rests solely with state and Federal authorities. Secondly, the law discriminates against lawn care companies and arborists, without including agriculture or homeowner pesticide users. Finally, the Interstate Commerce Commission is evaluating the impact of the law on interstate commerce.

The suit was filed in mid-September. Waucanda had 30 days to respond. The response will be published in December *Weeds Trees & Turf*.

PLANTS

Software package lists 800 shrubs

Ortho Information Services, a leading publisher of how-to gardening books, is introducing a new computer software package listing more than 800 shrubs and flowering plants organized according to growing zones.

A spokesman for the company said by entering the zip code of your area, a person can automatically access only those plants that can be grown in the specific region.

The software comes with a book, Gardening Techniques, a 192-page expanded version of the standard titles in the Ortho paperback line. The entire "Ortho's Computerized Gardening" software package will retail for about $49.95. It is compatible with Apple II Series, Apple MacIntosh, IBM PC and Commodore 64.

ASSOCIATIONS

PGMS hires Shulder as full-time director

The board of the Professional Grounds Management Society (PGMS) voted in October to hire a full-time executive director and named current part-time director Allan Shulder to the post. Shulder's contract begins January 1, 1985.

PGMS has been seeking applications for full-time director since its last annual meeting.

Michael Keating, chairman of the 1984 conference in Worcester, MA, told *Weeds Trees & Turf*, "Allan was restricted by his full-time job (as landscape maintenance director for a suburban Baltimore Hospital) and the board felt we needed a full-time director to realize the full potential of the organization. Since Allan knows the association better than anyone else and is already active in the Landscape Industry Association Council (LIAC), we budgeted the funds to enable him to go full-time."

The PGMS board set a goal of 1,500 members within two years, from its current 1,100. They discussed combining trade shows with another industry association and beefing up member services. More than 250 members attended the Worcester show which featured key speakers and tours to nearby historical sites.

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EDUCATION

WSNA deals out $5600 in scholarship funds

The Washington State Nurserymen's Association (WSNA) recently awarded eight students in horiticulture, landscape architecture, and related fields a total of $5,600 in scholarships and research grants for this school year.

Stephen Mark Nordeen, a Washington certified nurseryman and employee of Edmonds Garden Center, Daniel Ray Snipes, a horticulture student, Mary E. Auld, a third year landscape architecture student, and Elaine Montague, in her final year of horticulture and business studies, all received $800 scholarships. Nordeen attends Western Washington University, Mary Auld the University of Washington, and Snipes and Miss Montague Washington State.

The latest recipient of the WSNA Northwest Chapter's Jim Brown Memorial Scholarship (established in honor of Jim Brown, the blind founder of Wayfarer Nursery, who died in 1978) is David M. Hulings, a student at Edmonds Community College.

Receiving $300 scholarships were Nancy Sakagami and Steve Swartz,

For a job well done

Jon Loft, chairman of Lofts Inc., presents a check for $65,232.26 to Rutgers University representing the royalties on the 1983 harvested turfgrass seed developed by that university, including RAM I and Mystic Kentucky bluegrasses, and five perennial ryegrasses—Palmer, Repell, Diplomat, Yorktown, and Yorktown II. Loft credited the unusually high royalties to the increased demand for high-quality turfgrasses. Pictured with Loft (l to r) are Dr. R. Hurley of Lofts, and Drs. H. Indyk, R. Duell, C. Reed Funk, L.A. Douglas, and R. Engel all of Rutgers.

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both of South Seattle Community College, and Roger D. Anderson at Clark College.

AWARD

Dow's Chapman honored for articles

Douglas J. Chapman, horticulturist-administrator at Dow Gardens and a member of the *Weeds Trees & Turf* editorial board, picked up the Author's Citation for 1984 from the International Society of Arboriculture at a recent meeting at the Chateau Frontenac in Quebec City, Quebec.

During the past three years Chapman has had articles published in numerous scientific and commodity publications, including: *International Society of Arboriculture, Interanational Plant Propagators Society, American Nurseryman, Weeds Trees & Turf, American Horticulture Society, Purdue University, American Society for Horticulture Scientists, and Arborists Journal.*

The articles have dealt with some of the research conducted at Dow Gardens, Midland, MI, in the areas of propagation, provenance, plant adaptation, new plant introductions, and integrated plant management.

Chapman has been at the Dow Gardens since March 1975 with his main research concentrating on the development, propagation, and introduction of new woody ornamental trees and shrubs in the Great Lakes region.

Circle No. 139 on Reader Inquiry Card

ASSOCIATIONS

ASPA midwinter confab slated for Disney World

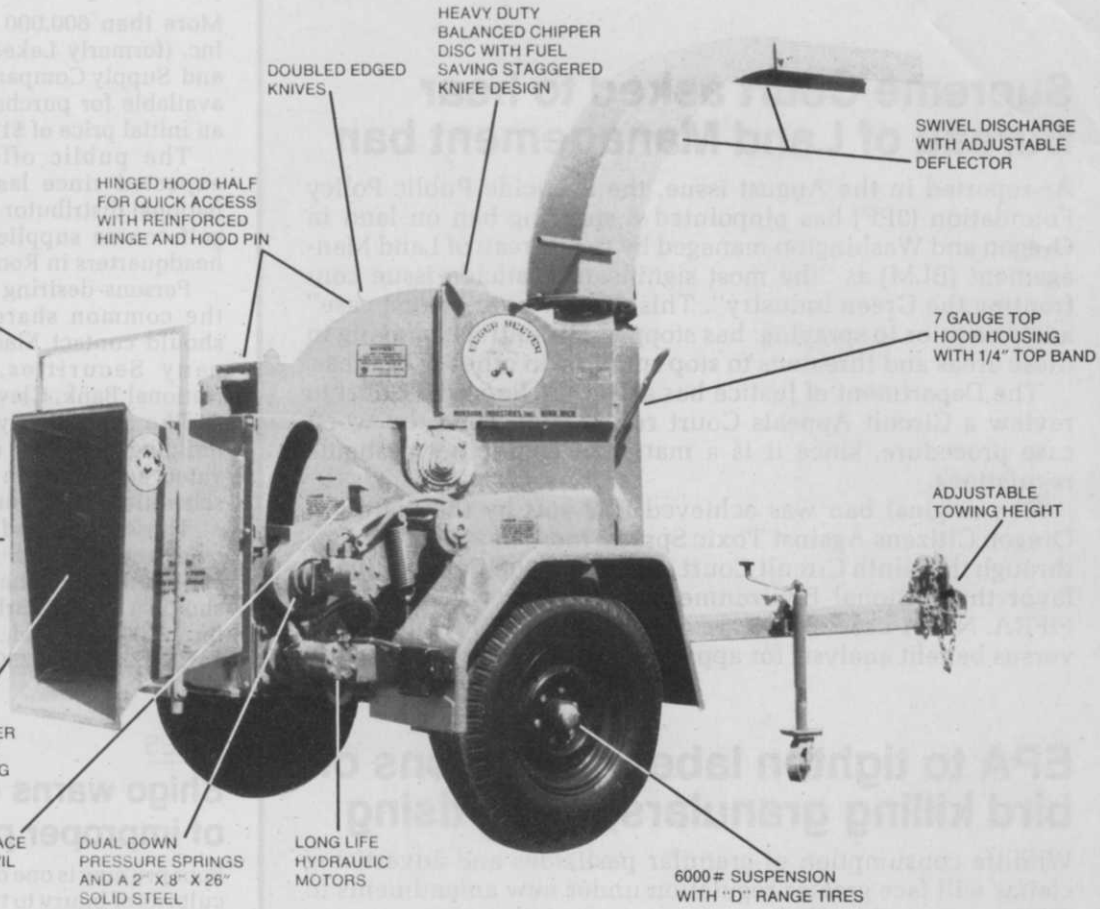
The Contemporary Hotel on the Walt Disney World Complex, just outside of Orlando, FL, is the site of the American Sod Producers Association's (ASPA) 1985 Midwinter Conference, and ASPA officials caution that early hotel reservations will be necessary because of the popularity of the hotel. The room reservation deadline is Dec. 16, which is 45 days prior to the actual meeting set for Jan. 30-Feb. 1.

In a related matter, the ASPA five-point code of ethics is being distributed to members in plaque form.

The broad-ranging code was approved by the organization's 13-member board of trustees earlier this year and was introduced in plaque form during the summer convention and field days.

Inquiries concerning the midwinter conference and the plaque can be directed to ASPA offices, 4415 West Harrison, Hillside, IL 60162, or phone (312) 449-2890.

Originality of concept sets the . . .



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GOVERNMENT UPDATE

Supreme Court asked to hear Bureau of Land Management ban

As reported in the August issue, the Pesticide Public Policy Foundation (3PF) has pinpointed a spraying ban on land in Oregon and Washington managed by the Bureau of Land Management (BLM) as "the most significant pesticide issue confronting the Green Industry". This dispute over "worst case" analysis prior to spraying, has stopped all contract spraying in these areas and threatens to stop spraying in other BLM areas.

The Department of Justice has asked the Supreme Court to review a Circuit Appeals Court ruling supporting the worst case procedure, since it is a matter of conflicting pesticide regulations.

The original ban was achieved in a suit by the Southern Oregon Citizens Against Toxic Sprays, Inc. They won the case through the Ninth Circuit Court of Appeals, the Court ruling in favor the National Environmental Policy Act (NEPA) over FIFRA. NEPA uses worst case analysis while FIFRA uses risk versus benefit analysis for approving pesticide use.

EPA to tighten label regulations on bird killing granulars, advertising

Wildlife consumption of granular pesticides and advertising claims will face greater regulation under new amendments to FIFRA proposed by EPA.

Certain granular pesticides have allegedly been toxic to feeding birds and other wildlife. These products would carry a restricted use classification.

EPA also wants to police advertising of restricted use pesticides. The proposal would probably be similar to Food and Drug Administration regulations focusing on claims of use, efficacy, and safety.

More restricted use training likely

EPA's Adminstrator's Pesticide Advisory Committee is hitting the question of direct supervision of restricted use pesticide applicators hard. Members of the Committee range in opinion from "on site" supervision to extra training, but not necessarily certification.

One member called direct supervision "impractical", recommending varying levels of training for different pesticide classifications instead. The representative from the National Campaign Against Misuse of Pesticides claimed certification was no more difficult than taking a driver's licence examination.

DISTRIBUTORS

Lesco goes public, plans open house

More than 600,000 shares of Lesco, Inc. (formerly Lakeshore Equipment and Supply Company) stock became available for purchase August 29, at an initial price of $11 per share.

The public offering has been expected since last fall when the national distributor of landscape and golf course supplies occupied new headquarters in Rocky River, OH.

Persons desiring a prospectus for the common shares of Lesco Inc. should contact MacDonald & Company Securities, 2100 Central National Bank, Cleveland, OH 44114.

The colonial-style headquarters building has been completely renovated and an open house has been scheduled for November 29, 1984.

Those interested in attending the open house, which is open to everyone working in the Green Industry, should contact Barbara Betz, Lesco, Inc., 20005 Lake Rd., Rocky River, OH 44116. (216) 333-9250.

TREES

Shigo warns effects of improper pruning

Poor pruning is one of the number one culprits of injury to trees, according to Dr. Alex Shigo of the USDA Forest Service, Durham, New Hampshire.

Shigo, one of the key speakers at this year's Professional Grounds Management Society annual conference in Worcester, MA, in October, told a packed room of professional grounds managers that neglect, poor care, and poor pruning are a tree's worst enemies.

"Nature does everything short of putting blinking lights on how a tree should be pruned," he said. "Nature comes with a set of instructions that are seldom heeded."

Shigo, one of the foremost plant pathologists in the country and a frequent international tree consultant, drove home the idea that a tree is a "compartmentalized" organism with many "boundaries."

"There is absolutely no way a tree can heal a wound," explained Shigo. "They set boundaries around the infected tissue that compartmentalizes it, but doesn't heal it."

Shigo passed out brochures on proper tree pruning at the conference. Additional copies can be secured by writing the Northeastern Forest Experiment Station, 370 Reed Road, Broomall, PA 19008.

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SNOW REMOVAL

A Big Part of Full-Service Landscape Management

by Ron Hall, assistant editor

Full service is a term heard more and more today from landscape maintenance companies. Snow removal, although seasonal, is a growing part of full service landscape management.

Readers have discovered by using the same sound business practices they use for growing season industries (and much of the same equipment too) they can build a lucrative off-season business.

Maintenance contractors sometimes don't have a choice. Snow removal is an integral part of the year-round condominium and apartment maintenance accounts they worked so hard to get. They HAVE to provide professional snow removal.

WT&T talked to Green Industry businessmen from across the nation and learned that whether they push snow for that all-important winter cash flow or as part of their regular maintenance tasks, there are several factors that determine their success. Three kept popping up: planning, equipment, personnel.

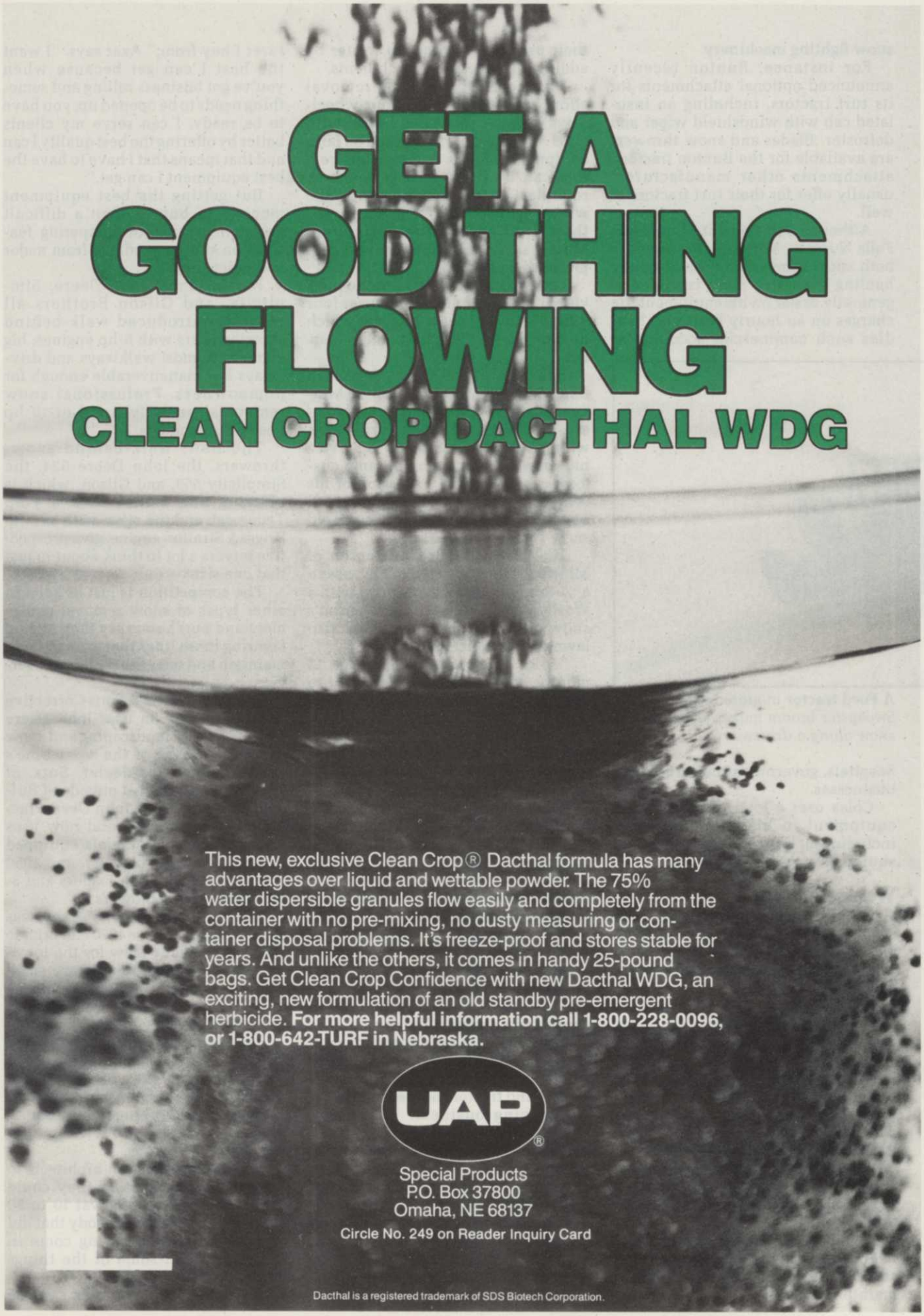
Bill McGee of Smith Lawn and Tree, Kansas City, MO, thinks planning is a major reason why his company is successful in providing snow removal for 43 commercial locations in his area. He wants his employees to know their territories and duties long before snow flies.

"We take our men out and let them look at all of our areas, usually sometime in October," McGee says. Besides acquainting the men to their routes and duties, this pre-season tour can pinpoint potential problems, like shrubbery or landscaping that's likely to get covered and possibly mangled by machinery.

Each of Smith Lawn and Tree's four-wheel-drive trucks contains a 12-page booklet giving locations and the types of equipment to use for particular jobs, and many of Smith Lawn's trucks are equipped with two-way radios. "We do this so that if somebody not familiar with the route has to do the work, he'll know what to do," McGee explains.

The Kansas City firm uses 16 pieces of equipment in its snow removal battles, including a small fleet of four-wheel-drive trucks with plows, one John Deere tractor with a blade, and two Hustlers which double as riding mowers in the summer. When the snow falls the Excel Hustlers are equipped with cabs, heaters, windshield wipers, and blades to work in and around sidewalks and touch-up areas.

Other companies also provide accessories to turn what is generally regarded as summer equipment into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snow fighting machinery.

For instance, Bunton recently announced optional attachments for its turf tractors, including an insulated cab with windshield wiper and defroster. Blades and snow throwers are available for the Bunton tractors, attachments other manufacturers usually offer for their turf tractors as well.

Although Bob Coles at Minnehaha Falls Nursery, Minneapolis, provides both snow removal and hauling, the hauling generates more cash and is generally easier on his equipment. He charges on an hourly basis and handles such commercial accounts as hospitals, government buildings, and businesses.

A Ford tractor *mounted with a Sweepster broom makes short work of snow along a driveway.*

Coles uses a total of 15 pieces of equipment in his snow business, including pickups and two-ton trucks equipped with Western plows.

Wear and tear

Wear and tear on equipment and higher insurance premiums should be carefully considered by those planning to offer snow removal for profit, he cautions.

Jim Moren, facility manager for Beachill Development Company, deals with an average of 50 inches of snow annually in Manchester, NH. At the 320-unit Beachill complex, just 40 miles from the Atlantic coast, blankets of wind-driven snow off the ocean create a big problem in 18 parking lots and 11 miles of sidewalks.

"We get a lot of heavy, wet snow and that's the hardest to remove," Moren says. "Anybody can remove that dry stuff."

Moren attacks snow with an arsenal of versatile machinery, often the same he uses during his summer maintenance duties. He just adapts their use from summer to winter by adding the necessary attachments.

The heart of his snow removal effort is a pair of 17-hp, four-wheel-drive Kubota tractors equipped with class A hitches (the same used on farm equipment). In the summer the tractors can be fitted with a backhoe, rototiller, or lawnmower, and in the winter with plows. "I'm not saying they'll do everything perfectly," Moren says, "but they're versatile pieces of equipment."

For clearing sidewalks to the individual housing units Moren uses four 8-hp Simplicity snow blowers which he describes as "the best on the market."

Bob Nagel of Bob's Lawn Service in Eden Prairie, MN, a suburb of Minneapolis, uses John Deere snow blowers, a Bobcat, and seven Ford trucks with Western snow plows to service his snow accounts who became customers as a natural extension of his lawn care business. "It just kind of fell in place," Nagel says of his 10-year-old snow removal business.

Like Nagel, Craig Christenson of Midwest Turf in Wayzata, MN, uses a a 3/4-ton Ford pickup equipped with a Western plow. Many of Christenson's snow removal customers are also lawn maintenance customers.

"A lot of people want service 12 months of the year and they want to deal with one person instead of a lot of different people," Christenson says. "So, if you're willing to expand yourself, you open yourself up to a bigger market. If things start to get too big, we subcontract some of it out."

Some of the largest accounts in the northeastern Ohio city of Akron are handled by Fred Azar whose landscaping and snow removal businesses are only six years old. Azar believes in getting the most out of his equipment, so he preaches maintenance.

"In changing from landscaping to snow removal I have to make sure everything is tuned up and in perfect working condition. Breakdowns are usually more annoying and more expensive in winter," he says.

The heart of Azar's operation is 16 four-wheel-drive dump and pickup trucks and an assortment of front loaders and tractors he also uses in his landscaping business. "That way they're not sitting around all winter," he explains. "They're out there making me money."

Among his 75 accounts is Akron City Hospital with its helioport which Azar must keep free of ice (he uses an alcohol-based solution) and miles of sidewalks which he assaults with an army of 15 Toro snow blowers.

"There isn't one special manufacturer I buy from," Azar says. "I want the best I can get because when you've got business rolling and something needs to be opened up, you have to be ready. I can serve my clients better by offering the best quality I can and that means that I have to have the best equipment I can get."

But getting the best equipment money can buy is often a difficult decision because of competing features on similar products from major manufacturers.

For instance, John Deere, Simplicity, and Gilson Brothers all recently introduced walk-behind snowthrowers with 5-hp engines, big enough for most walkways and driveways but maneuverable enough for homeowners. Professional snow removers generally use 8-or-10 hp heavy-duty models.

The new, walk-behind snowthrowers, the John Deere 524, the Simplicity 555, and Gilson, which is offering one model with a 4-hp Tecumseh and the other with as 5-hp Briggs & Stratton engine, give prospective buyers a lot to think about in just that one size.

The competition is just as keen in other types of snow removal equipment and purchasers say they end up favoring those lines that are easiest to maintain and offer the best dealer service.

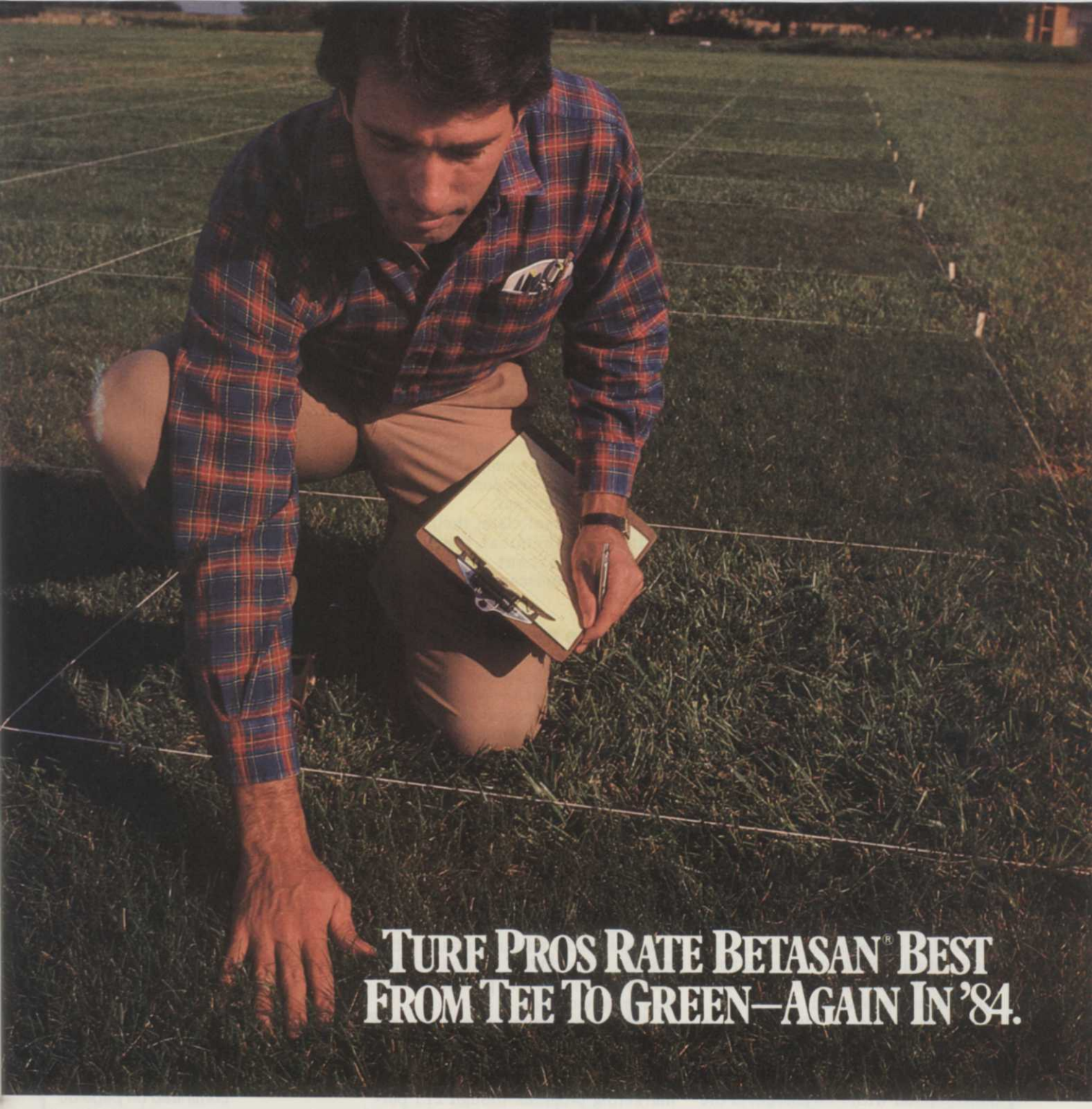
Bob Sutz of Sutz & Sons Corrective Landscape says he uses John Deere tractors in both landscaping and snow removal because of the service he's received from his dealer. Sutz, of West Seneca, NY, just outside of Buffalo, bought his first John Deere tractor several years ago and now uses four: 318 and 650 models equipped with front-mount blowers, and 1050 and 1250 models with loaders and 3-point hitch snow blowers.

Sutz, no rookie snow jockey, has been in business since 1970 and prior to that drove a snow plow for the township. Most of his accounts are small plazas and large restaurants, and he suggests that businessmen should plan for snow when they build.

For instance, improperly placed planters and landscaping could cost a businessman an extra $300 to $500 a winter. "If we're on the job an extra 40 or 50 minutes working around something each time we go out it's going to cost more," Sutz says.

"When they bring in architects to design these businesses they could reduce their snow removal 10 to 20 percent if they had somebody that did commercial snow plowing come in and show them some of the things they should look out for."

continued on page 86



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LANDSCAPE MANAGEMENT

The lawn care industry continues to set records in gross sales and growth. Analysts don't predict a slackening until the late 80s and a leveling off early in the 21st century. Right now, though, the industry is booming with companies becoming more professional and more service-conscious.

A Bull Market

It's a "bull market" in the lawn care industry.

According to the results of a survey done by *Lawn Care Industry* magazine, gross sales of the nation's leading lawn care and landscape management companies in 1983 was a record-setting $2.22 billion. That represents a 20.2 percent increase over the 1982 figure.

Market growth should continue in the 20 to 25 percent range for the remainder of this decade, but the cloud isn't totally silver-lined. Certification, prenotification, self-policing and expanded services are industry spectres refusing to go away. Market saturation is also hanging heavily over lawn care companies in certain markets.

Industry profile

Respondents to the *Lawn Care Industry* survey indicated that an average of 90.8 percent of their accounts were residential. Translated, that means the readers of the magazine serviced about 6.4 million home lawns in 1983. Overall, more than seven million accounts were serviced.

About 7 out of 10 LCOs are involved in disease control, aeration and/or renovation. Of these add-on services, disease control is slightly more popular with 73.6 percent of the respondents answering positively. Aeration tasks are undertaken by 71.9 percent of the respondents and renovation by 69.4 percent.

Fifteen percent claim their entire business is chemical lawn care. Another 7 percent claim to do exclusively landscape management accounts.

Where the money goes

The typical survey respondent spends 29.93 percent of his gross receipts on labor, 15.70 percent on fertilizers and pesticides, 7.94 percent on fuel and 4.02 percent on advertising.

The average reader's pretax profit is 20.53 percent. Overall, the predominantly chemical lawn care business scored higher in pretax profit than the predominantly landscape management business, 22.19 percent to 19.58 percent.

Based on these figures, the pretax profits of lawn care businessmen in 1983 were $456.3 million. They pumped $665.3 million into the labor market, spent $176.5 million on fuel for their vehicles and paid $89.4 million for advertising.

Telemarketing is a relatively new phenomenon to the industry. Just 5.8 percent of the respondents indicated they are involved in a full-blown telemarketing program, though 21.1 percent said they use telephone solicitation as part of their advertising plans. Studies have shown, however, that telemarketing can be more cost-efficient than direct mail, cutting the cost by as much as one-half.

Marty Erbaugh, president of Lawnmark Associates, Peninsula, OH, and a former Professional Lawn Care Association of America president, said, "You may choose to avoid the reality of these figures, but telemarketing is here to stay."

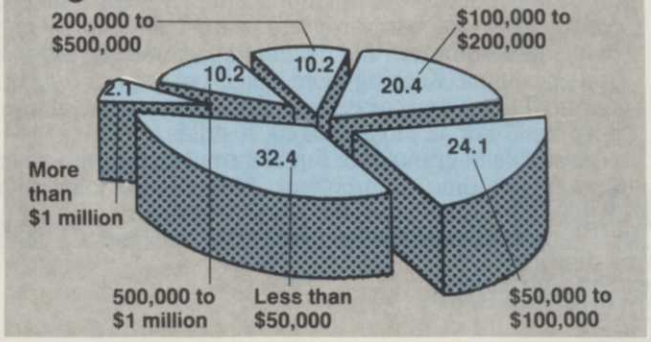
LCO profile

Three out of every four businesses in the lawn and tree care industries DO NOT belong to either a state or regional professional organization, according to the National Urban Pesticide Applicators Survey. The survey, done by Frederick W. Immerman of the Center for Survey Statistics, found that 74.37 percent of all tree/lawn care firms did not belong to a regional or professional organization. Just 18.73 percent of the 3,208 companies said that they did, compared to 41.14 percent of 5,496 structural pest control operators.

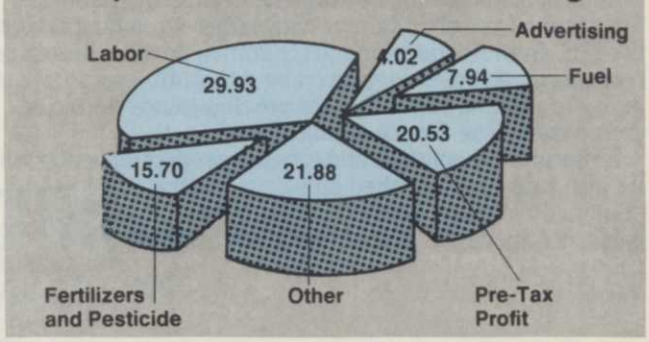
According to the Immerman survey, most of the companies involved in tree or lawn care fell into a bracket of less than $25,000 gross sales per year.

continued on page 36

How Much Gross Sales Did You Register in 1983?



What Percentage of Your 1983 Gross Receipts Went Toward the Following?



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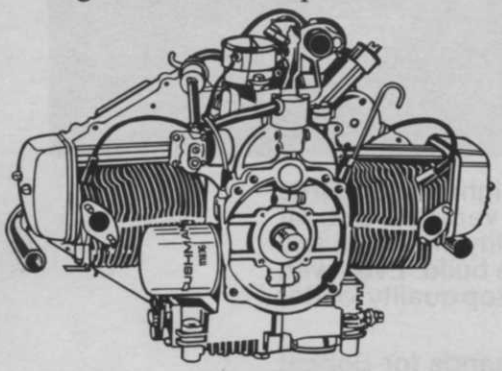
That's why we created the Cushman Grass Grooming System. With it, you can cut, catch, dump and resume cutting without interruption.



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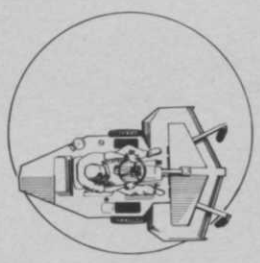

Dual traction assist pedals provide a tight, zero turning radius.

Years of dependable performance.

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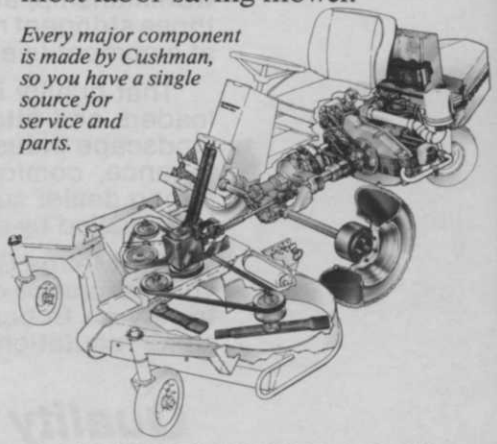
Every major component is made by Cushman, so you have a single source for service and parts.



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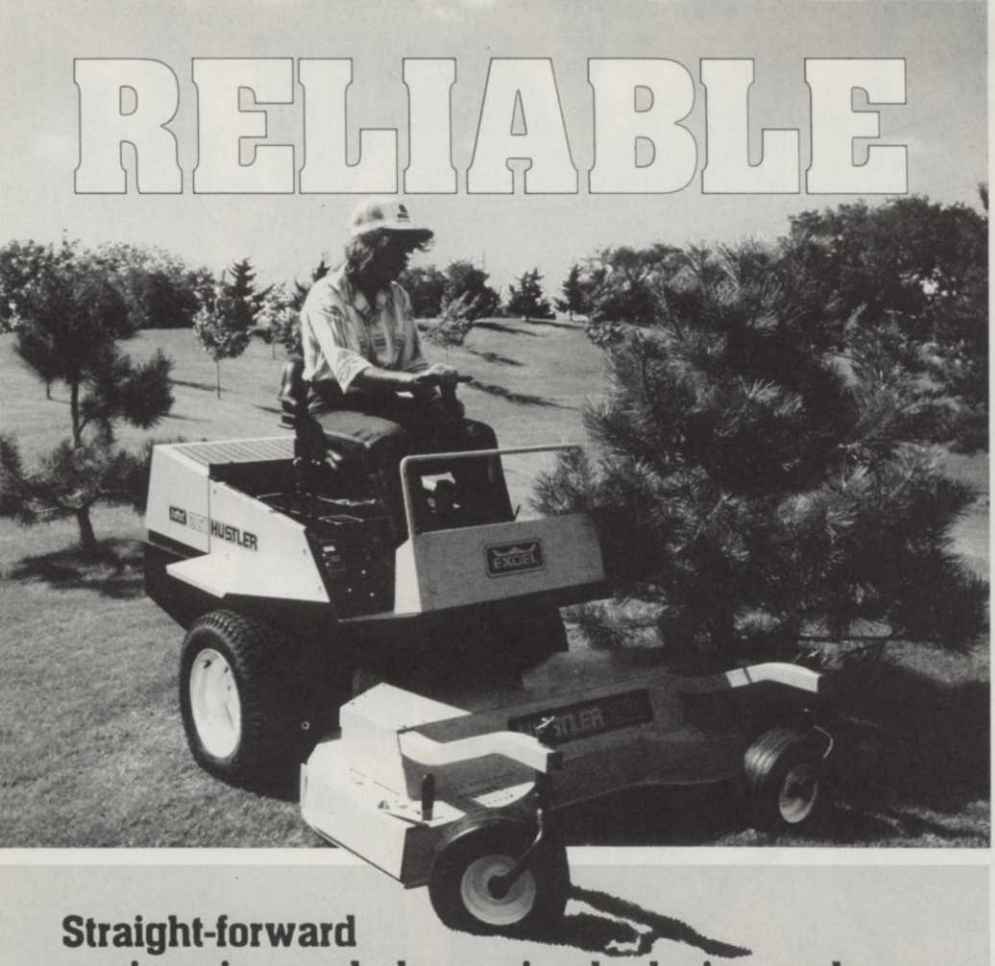

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HUSTLER's dual hydrostatics are the key to minimizing your daily and scheduled maintenance. This time-proven concept eliminates expensive, high maintenance items like gears, chains, clutches and pulleys.

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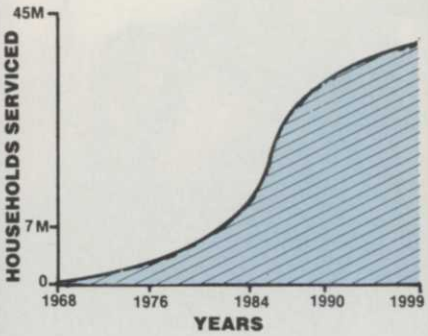
SURVEY *from page 32*



Lawn Care Growth Curve

Homeowner attitudes also provide insight into the market. Six percent of 45 million owner-occupied single-family homes with lawns in this country contract for professional lawn care. That percentage increased to 13 for homes with incomes more than $20,000 per year. Of all lawns contracted for professional lawn care, 34 percent are under 5,000 square feet. Fifty-four percent are under 7,500 square feet. Homeowners' biggest lawn problems are weeds (summer annual broadleaf); insects (white grubs); disease (Fusarium blight); and drought injury.

LCOs contacted for the survey had a generally upbeat outlook for the future of the industry.

Down the road

Jim Chapman of Lawn Aid, Bellevue, WA, says he sees the industry growing in two directions.

"There will be companies like mine involved in full service and I also see a need for specialty companies like ChemLawn which may perhaps become even more specialized. There's more money in specialization because there's more satisfaction in full service if you do a good job."

Joe Williams of Lawn Master, Pensacola, FL, ranks pesticide regulation at the top of his list of things affecting his industry's future. Says Williams, "It could be very damaging if it got out of hand. If we don't monitor it ourselves and get control of it—misuse of pesticides, that is—we've got enough of it that environmental groups will definitely take advantage of our mistakes and hurt us all in the long run."

One industry analyst sees lawn care industry sales conforming to a standard bell curve. This means the sales growth rate will start to decrease late in the 80's, and level off early in the 21st century. **WT&T**

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LANDSCAPE MANAGEMENT

With only six years in the business, Jim Marria's Perma Green, based in Boise, ID, continues to sprout branches in a multi-state area. Even in a saturated market, Perma Green's brand of quality and service has kept it on top of the lawn care market.

Gentleman Jim

by Maureen Hrehocik, managing editor

Six years ago, Jim Marria sat in the garage/office of his newly-formed company, Perma Green. He had one truck, one employee and a secretary—his wife, Karen.

Today, Marria sits in a new office complex overlooking the Boise, ID, airport (where he keeps the company plane), has 45 vehicles, 120 employees, five multi-state branches with plans to open a sixth next year, and has sampled the sweet taste of success. This year Perma Green will do about $4 million in business; ninety-five percent of that will be residential, the other 10 percent commercial. His company is a leader in the industry and not even overtures of a buyout by the largest lawn care company in the country has deterred Perma Green's growth and determination.

Jim Marria, *president and founder of Perma-Green flanked by a drawing of his twin-engine Cessna.*

Growth has been so great that Marria, 35, even got his pilot's license. His twin engine Cessna is a much more efficient way of getting to his company branches in Reno, Spokane and the Tri-City area than driving or commercial flights.

The branch visits have been cut down, though, usually to once a month.

"When you have good managers, you don't need to supervise as much," Marria says.

For all his success, Marria prefers a low profile and downplays his accomplishments. "I'm a good organizer and can accomplish a lot in a short while."

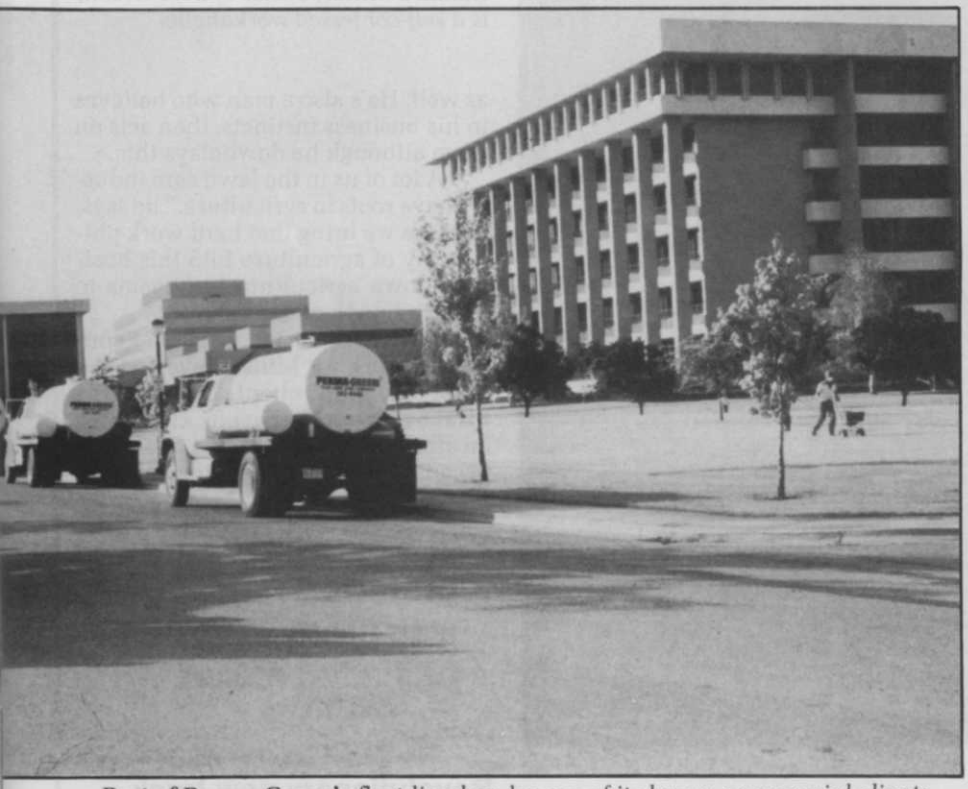
"When you have good managers, you don't need to supervise as much."

Marria's company is *very safety conscious. Worker pictured is wearing boots and mask to apply Oftanol.*

Where it all started

Marria's gut feeling that he knew what he was doing and knew the industry well prompted him to start his own business back in '78.

"I also knew we had good people," he says. Much of what Marria learned about lawn care he credits to his eight year tenure with the Davey Tree Service Co. of Kent, OH. There, along



Part of Perma-Green's *fleet lined up by one of its larger commercial clients, Morrison-Knudsen in downtown Boise.*

with Marty Erbaugh, (now owner of Erbaugh Corp., Lawnmark Division, Peninsula, OH), they started Davey Tree's lawn care division.

"We did a lot of research on lawns back then," he relates. "I also read a lot. It was difficult to convince people they needed lawn care. Word of mouth and seeing the product was, in the end, what convinced them." Marria continues his people-oriented philosophy. He says he looks for people who are willing to give 110 percent.

"It really scares me (pesticide regulation). It's a larger threat than most people perceive."

He, in turn, practices what he preaches. He makes visits to branches as often as necessary, usually about once a month. Before he had the managerial manpower to delegate some of that responsibility, he made visits more often.

"I'm still there to support my managers when they need it."

Marria has two managers who report directly to him. Lowell Troyer is the branch manager and Mike Spicer is division sales manager. There is also a marketing manager and a corporate office manager. All marketing work, including marketing studies, is done internally.

Marria's efficient corporate team affords him time to indulge in one of his favorite pasttimes—running. The 35-year-old puts in about five miles a day and in May ran his first marathon—in Paris. Summing up the grueling experience, Marria says, "I finished."

"I was supposed to run the Seattle Marathon, but a week before it, I hurt my leg during a run in San Fransico. I was going to Europe anyway and decided to try to run the Paris marathon. It was a goal."

Back home in Boise, Marria runs frequently in local races.

Biggest threat

Like other concerned lawn care company owners and operators, Marria feels the single thing that could bring the industry to its knees is governmental pesticide regulation.

"There are so many things we (lawn care industry) could cope with, but not this," predicts Marria. "It really scares me. It's a larger threat than most people perceive.

"Our business is to provide green, weed-free lawns," he continues. "If chemicals such as 2,4-D are limited in non-agricultural applications, it could do us in."

Marria feels exposure as an industry is 98 percent of the solution.

"Lawn care operators must join associations and become involved in the Professional Lawn Care Association of America and with the Pesticide Public Policy Foundation."

"Our service and quality will continue to grow; that's how we will continue to offset the competition."

Nowhere but up

Marria's business continues to grow. Last year, business increased about 30 percent. But, Marria is quick to admit the market is small and it's becoming somewhat saturated.

"Our service and quality will continue to grow; that's how we will continue to offset the competition."

With his increasing managerial responsibilities, Marria does admit missing being out in the field and dealing with people.

Looking back on his experiences and on starting a business, Marria says two things have definitely changed about him.

"I've become a much better businessman. Now there is more and more of a need to do things right. My decisions have a major impact on the future of this company." He pauses and adds with a smile, "I've also gotten a lot more grey hair." **WT&T**

LANDSCAPE MANAGEMENT

Richard Miller, *owner of Ever-Green, is a self-confessed workaholic.*

Ever-Green's Gold

The largest lawn care company in Colorado attributes its success to knowing its territory and delivering a quality product.

by Ron Hall, assistant editor

You can tell the boss from the others because he's the only guy wearing bluejeans.

Richard "Dick" Miller, the boss of Ever-Green Lawns, stepped from his office wearing jeans with his sportcoat, a tipoff of sorts that in spite of being the owner and operator of the biggest lawn care business in Colorado, he's about as down to earth as a person can get.

How much more down to earth do you want?

Son of an Iowa farmer. Iowa State University ag graduate. "I would have preferred to have farmed but I was pretty sure I was going to be broke the rest of my life," he says almost wistfully; and, at the relatively young age of 36, he isn't ruling out some farming yet which would be good news for his competition in the front range of the Rocky Mountains which, when the sun is setting nice and big and red, throw a heck of a shadow well out over the lawns of Miller's 40,000 lawn care customers.

Discard any notions about plans for Miller's imminent retirement, however. His lawn care company is prospering with five branch operations serving customers from Fort Collins to Colorado Springs. Ever-Green Lawns employs 300 and uses more than 70 pieces of equipment.

In spite of his background—or, more correctly because of it—Miller is certainly no hayseed, a hard worker for sure, but no rube. He's the kind of guy who believes in getting to work at 8 a.m. and putting in a full day, which is what he expects from his employees as well. He's also a man who believes in his business instincts, then acts on them although he downplays this.

"A lot of us in the lawn care industry have roots in agriculture," he says. "I guess we bring that hard work philosophy of agriculture into this business. Iowa agriculture just seems to breed a bunch of workaholics."

Chuck Kirkpatrick, who does consulting work for Miller, revealed the other side of his client, "He's willing to take risks for the payoffs. He creates an atmosphere that we like. It's a fast-paced, entrepreneurial atmosphere."

"I would have preferred farming, but was pretty sure I'd be broke the rest of my life."

Revolutionary new truck

In line with that assessment is Miller's latest project, the development and manufacture of a stainless steel tank truck specifically designed for the lawn care industry by Denver Leasing and Manufacturing, the manufacturing arm of Ever-Green Lawns. Like the lawn care business, it too is based in Golden on the fringes of Denver.

"I think this (truck) will be a big deal for us," Miller says. "We've entered the marketplace and we will have a booth in Tampa (Professional Lawn Care Association of America Show Nov. 12-15). I think we've got a better mousetrap and we've accomplished what we set out to do—to produce an extremely high quality item."

The truck, designed and engineered by Bob Smith and Steve Tangsrud, features a low center of gravity, automatic transmission, power steering and handles beautifully, Miller explains, while cutting maintenance and fuel costs in half over models presently in use. "This fits into our philosophy of minimum maintenance. We're not in the lawn business to maintain trucks. We're in business to satisfy customers," he adds. "It (the truck) is a litte bit more expensive, but a lot less costly to maintain."

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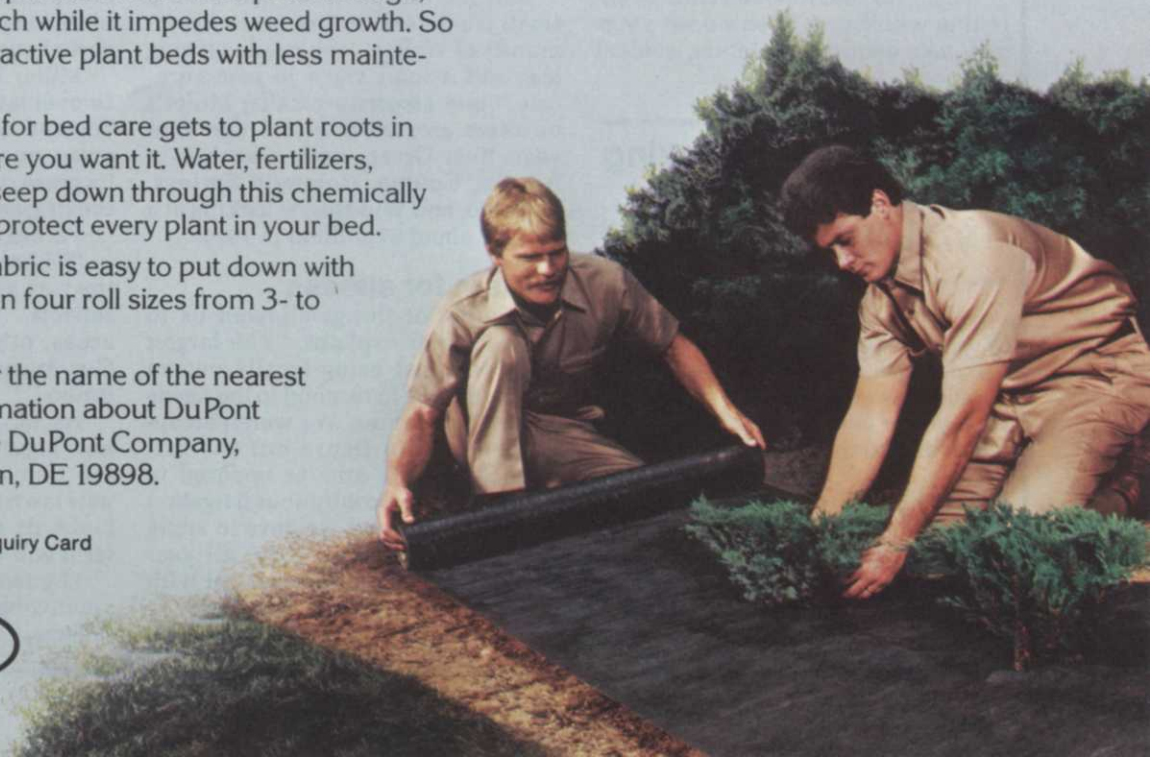

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Ever-Green's client list is more than 40,000 strong.

Another related venture is Ever-Green's liquid organic soil builder, Revive, which is sold commercially as well as used extensively in Miller's lawn maintenance business. Last winter Ever-Green purchased Revive from Amesco of Denver. Miller's company had been using the soil builder Revive, composed of plant bi-products, decomposition extracts, and fuluohumates, extensively to improve water penetration into Colorado's hard clay soils for some time.

The truck and Revive ventures are in line with Ever-Green's do-it-yourself, take-control reputation, evident in the Golden sales and production office which, besides the usual array of offices, is equipped with a full-service garage and paint room, printing office, and conference room.

Ever-Green is looking at a gross of about $7 million in 1984.

Pivitol year

This year marks Miller's tenth year in the lawn care business and unquestionably a pivotal one. He became aware of the industry as an agricultural sales consultant for Dow Chemical, came to Denver in 1974 with two partners to start the business as part of Ever-Green of St. Louis and Kansas City, and in 1980 Ever-Green Lawns Corporation in Colorado separated itself completely from the other Ever-Green. The two are not related now.

Miller remembers his step into the lawn care business 10 years ago. "I had a career decision to make. I could have moved to New Jersey, gone back to the farm, or. . ." The rest is history.

Starting out on what had been a small truck farm in the nearby community of Welby ("you needed strong legs and a loud voice to communicate," one associate recalls) Miller's business grossed $170,000 that first year. Ever-Green, with branches in Aurora, Golden, Colorado Springs, Littleton, and Windsor, is looking at a gross of about $7 million in 1984.

Pattern for sucess

"A couple of things allowed us to grow," Miller explains. "The largest thing was just being locally owned and being able to respond to the needs of the Denver area. We were perceptive enough to figure out the differences in this area as opposed to others. With our continuous irrigation thoughout the year we have to apply heavy amounts of fertilizer all year long. We got that under control with sulfur-coated urea."

Ever-Green started buying sulfur-coated urea from Canada in 1976 ("it meant you could put down more fertilizer in the summer and reduce the risk of burning," he explains) and the lawns maintained by Ever-Green looked better. Miller is convinced it is better to "put down more, charge more and give the customer a lawn that beats the hell" out of the neighbor's lawn.

"Our success is due to our employees," Miller emphasizes. "I've got a bunch of neat people. A lot of them have been around here for ages and I guess I feel it's been the growth of the entire organization that has made it successful."

This year marks Miller's tenth year in the lawn care business and is unquestionably a pivitol one.

Perhaps the most visible member of Miller's management team the past five years has been staff horticulturist Herb Gundell who was extension agent 30 years for Denver County prior to joining Ever-Green. In addition to putting together three weekly radio spots, Gundell's weekly television show about lawns and gardens is the longest-running television program in Denver. "Anytime you get that kind of run you're very visible," Miller says. "He's a very important part of our organization."

Miller feels the big growth in the Denver lawn care market has peaked, "maxed out," as he puts it. "We'll swap customers and we'll either increase or decrease depending upon the degree of service we provide."

Future plans for Ever-Green?

"There's potential expansion into the tree and shrub business," Miller reflects. "Maybe lawn care in other areas, other states, Dallas maybe. Our expansion plans are kind of in limbo."

As for Miller, with his business now bigger than most of the others in the Denver area combined and the new lawn maintenance truck ready to make its mark on the industry, the farm will have to wait.

"I guess you could probably say I am involved in farming in a way," he reflects. **WT&T**

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The Black Box

An Iowa contract applicator has improved his company's image and his spraying accuracy by using a sprayer controller. This "black box", Rod Foster thinks, could change the lawn care industry.

The sprayer controller "black box" may become to the turf market what it has become to agriculture, more a necessity than a luxury.

Rod Foster is partner with his father, Verne, in Turf Control, based in Waterloo, IA. The younger Foster started the business three years ago. The company now employs six people.

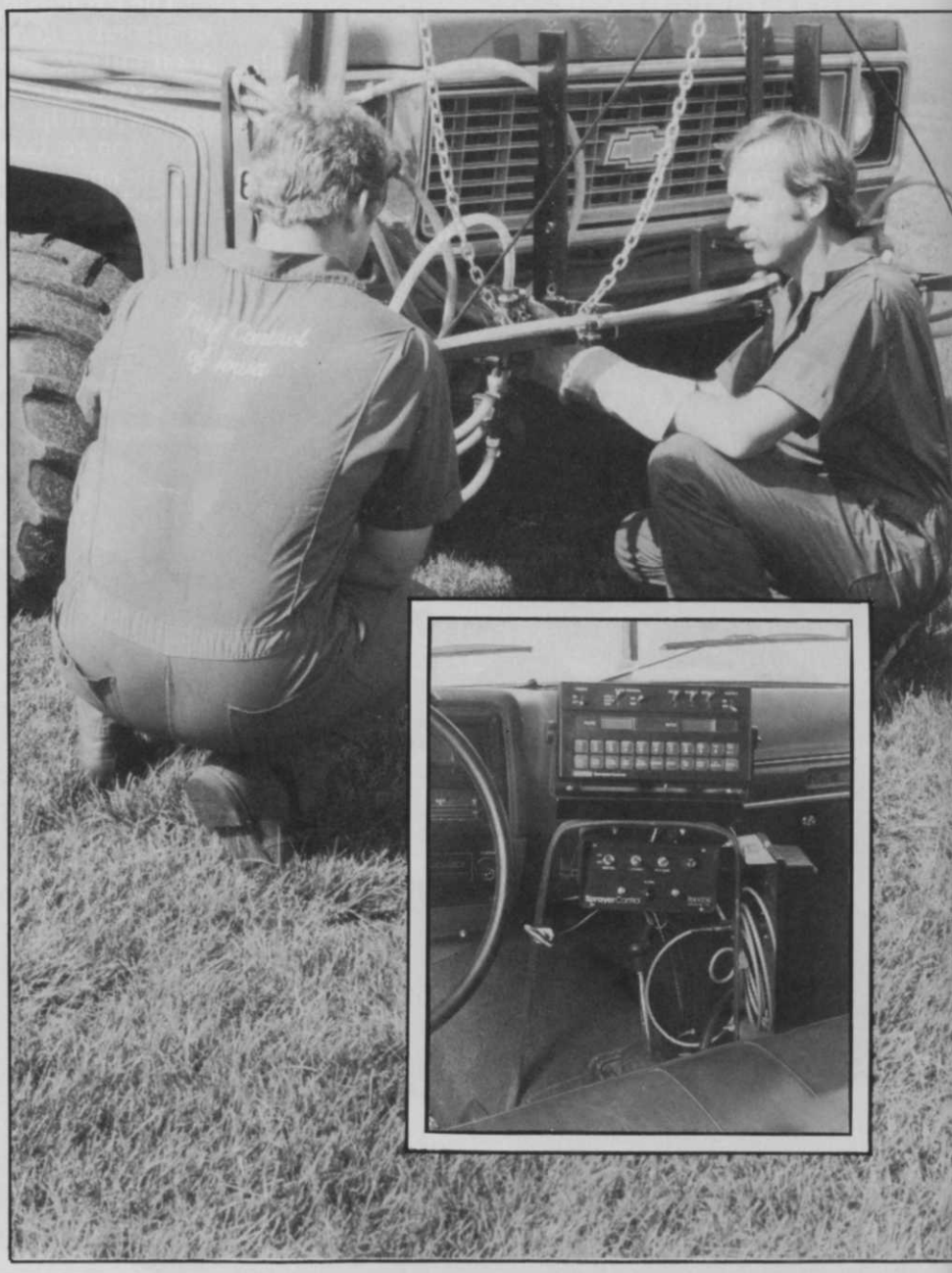
Turf Control's client list includes schools, hospitals, churches and residential accounts covering about 2,000 acres. Foster says he does about 75 percent commercial work and 25 percent residential.

Foster's company is involved in several turf care markets, including residential lawn care, football field maintenance in Eastern Iowa, care of commercial properties such as hospitals, schools and local businesses, custom application for golf courses and many other accounts.

He contends the application accuracy he achieves with his controller is helping build a reputation of high competence for his company.

"I'm in exact compliance with the label and minimize application errors caused by inaccurate equipment calibration," Foster explains. "With the kinds of results possible, I think more people in the turf care industry may soon be using them.

"With this guaranteed accuracy, Foster says he can project a more professional image, he is able to maintain better cost control and he can even serve the environment by guarding against misapplication.



Foster, left, and Mike Wienands *adjust the pneumatic no-drip nozzles on their unit. In inset, controller system is mounted within easy reach in the cab of the pick-up sprayer.*

Foster's unit sees *most of its use on commercial accounts of one to one-and-a-half acres.*

In the two seasons Foster has used the electronic sprayer controller system, his average percentage of application error has been just less than three percent.

"On level terrain with few or no obstacles such as a football field, I can come within .03 percent of the target rate," he claims. The University of Nebraska says that application errors of plus or minus 10 percent are considered acceptable for any spray application.

"The accuracy I achieve with the controller assures the results I demand when I bid the job," Foster says. "I can guarantee my work with confidence. There have been times when I have bid jobs higher than the competitors, but the accuracy sells the job."

Foster used a Raven SCS 400 system in 1983 before upgrading to the SCS 440 this season. Both units are controllers, providing automatic control of application rates, maintaining the target flow regardless of vehicle speed.

Virg Huebner, chief engineer for Raven Industries explained the difference between monitors and controllers.

"The monitor only determines what is happening and tells the operator, usually with a digital display showing the gallons per acre (GPA) being applied, what it sees. The monitor does not adjust the flow rate for the operator.

"The controller, however, measures what is happening and uses a motor-driven control valve to adjust spray pressure and compensate for changes in ground speed," Huebner said. "These units thereby maintain the selected application rate at all times."

... his average percentage of application error has been just less than three percent.

Controller systems basically consist of only four components:

- a console keyboard, the "brains of a system
- a flow meter, measuring actual flow vehicle speed
- a speed sensor, measuring actual vehicle speed
- a control valve, motorized for fast pressure adjustment.

"The accuracy I achieve with the controller assures the results I demand when I bid the job."

The flow meter and speed sensor send their information to the console, which relays the proper adjustment information to the control valve.

"Any deviation from the preprogrammed GPA is adjusted for by the control valve which adjusts the flow pressure inorder to keep the actual GPA constant," Huebner says.

A spray unit equipped with the sprayer controllers sees most of its use on commercial accounts of one to one-and-a-half acres and more. He thinks it's worth using the unit on any tract of land where obstacles can be worked around, simply because of the assurance of an accurate application.

Another aspect Foster tries to stress to customers is environmental. He believes misapplication is a threat to the entire fertilizer and chemical industry as environmental agencies become more concerned with the number of individuals who do not apply within the guidelines of the product labels.

"As an operator, the biggest environmental threat of course, is misapplication," Foster contends. "I push the advantages of using electronic controllers from an environmental standpoint because it is the only sure way of documenting that you are within environmental and labeled safety guidelines. I can be positively sure that I'm putting on legal labeled rates at the proper intervals." **WT&T**

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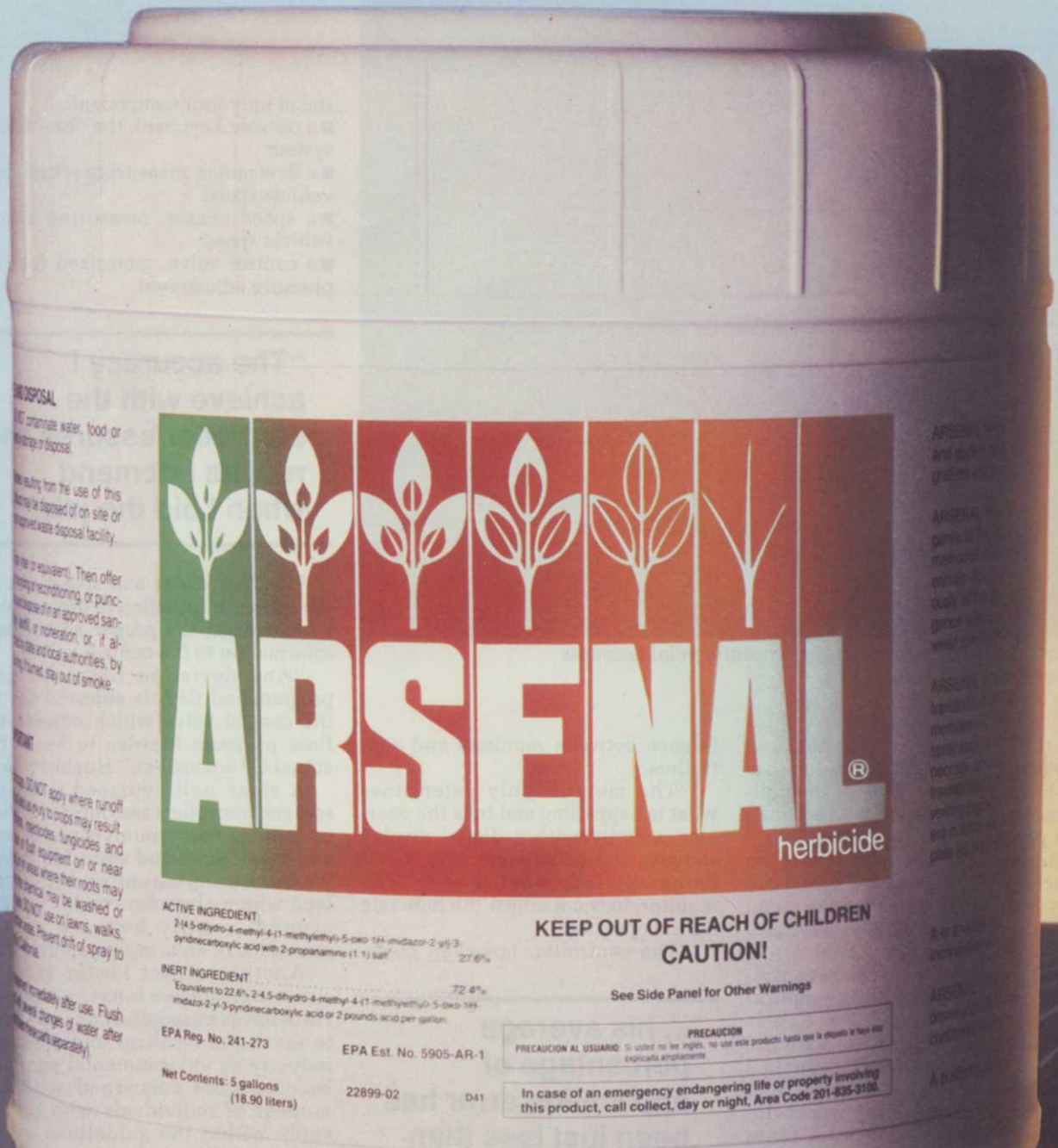

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Circle No. 242 on Reader Inquiry Card

Fine fescues are an under-utilized, often ignored group of grasses that have great diversity and much greater turfgrass potential than generally recognized.

They are basically cool-season grasses, but they are found growing readily throughout much of the temperate region of our continent, from the mountains of New Mexico and coastal marshes of Georgia to the colder regions of our hemisphere.

Creeping red fescue seed from the Pacific Northwest, Canada and Europe, and Chewings fescue from New Zealand and the Northwest have been marketed since the 1940's. A Rhode Island Agricultural Experiment Station lawn seed mixture, formulated in the 1930's, listed Chewings and creeping red fescues as a major ingredient.

Attributes

The improved fine fescues, as a group, have many remarkable attributes that make them first-rate lawn grasses. In general usage they are used in mixtures with other grasses, such as Kentucky bluegrass, perennial ryegrass or bentgrasses. They produce beautiful turf in pure stands but their versatility and desirable attributes may be enhanced in mixtures.

The versatility of general seed mixtures containing fine fescue is greatly broadened because of the wide adaptability of the species. Fine fescues will tolerate a wide range of

Landscape Manager's Guide to:
Fine Fescues

by C. R. Skogley, Professor, Turfgrass Management, University of Rhode Island, Kingston, RI

Chewings fescue survives shade *where Kentucky bluegrass in home lawn failed. Extensive rhizomes in older creeping red fescue plants prove its spreading nature. (See inset)*

light conditions, from full sun to fairly dense shade. They grow well on soils too light and sandy, infertile and acidic, for most cool-season lawn grasses and grow even better on good soils. They tolerate dry soils but do poorly on wet soils. They perform well on roadsides with infrequent high mowing yet some of them will perform well on golf course fairways at a height of 1/2 to 3/4 inches.

Under turf conditions, fine fescues are of delicate texture. They can form dense stands with brilliant shades of green and, because of texture and color, they also blend well with most other cool-season grasses.

Seed of fine fescue is of medium size, ranging from 500,000 to 80O,0OO seeds per pound. They are small enough to be a bargain by the pound yet large enough to pack sufficient reserves for good seedling vigor.

Germination of fine fescue seed, under favorable soil temperature, requires from 5 to 12 days, almost as rapid as perennial ryegrass. This is a significant plus when used in mixtures with slower establishing Kentucky bluegrass. Because of the very fine leaf texture of these grasses, they are not overly competitive in the seedling stage.

Fine fescue seed for domestic use is currently grown primarily in the Pacific Northwest and in the Canadian Provinces of Alberta and British Colombia. The improved varieties currently being marketed are grown almost exclusively in the U.S. Pacific Northwest.

Improvement in 60's

The first significantly improved turfgrass was Merion Kentucky bluegrass, released in the 1950's. Improved fine fescues did not appear until in the late 1960's.

Fine fescue trials containing 23 cultivars were established at the Rhode Island station in 1968. Results obtained over the next five years clearly demonstrated genetic improvement over any material commercially available at that time.

Common Chewings fescue such as Cascade and the Pennlawn variety of creeping red fescue were the best materials available during the 1960's. Astonishing differences were noted between these standards and some of the new cultivars included in those 1968 trials.

Table 2 contains quality score data from three Rhode Island trials. It is interesting, and important, to note that the improvement occurred with Chewings and hard fescue and not with creeping or spreading types. Note also that many of the cultivars performed as well in these trials at a 3/4-inch cutting height as they did at l 1/2 inches.

These were irrigated trials receiving 2-3 pounds of nitrogen per 1,000 square feet annually. The three trials encompassed a period of 15 years. The 53 varieties listed are only some of those tested and those with experimental designation were not included in Table 2.

We currently have a single trial, established in 1983, that includes 85 named and experimental cultivars of fine fescue. This is an indication of the increasing interest among plant breeders and demonstrates a strong feeling for the potential of these grasses.

Because of the heterozygous nature of the fescues it is possible to observe greater differences within a variety than between varieties. Under turf conditions, it is often difficult to see clear-cut differences among many varieties at any given time. Differences in cultivar performance throughout season and over a period of years can be documented.

Creeping and spreading fescues are generally coarser than the other fescues and are capable of greater lateral growth through the production of short rhizomes. Stands tend to be more open than with Chewings or hard fescue.

Improved Chewings and hard fescues develop dense stands through the production of numerous basal tillers. Hard fescue often has a slightly duller hue than Chewings but may hold its color through periods of high summer temperatures better than other grasses. Hard fescue also seems to be more tolerant of high salt concentrations in the soil than creeping, spreading or Chewings fescues.

Seed production of hard and sheeps fescue has been more difficult and costly than with Chewings or creeping red fescue, thus making seed more expensive. Efforts are underway to minimize this added cost.

Sheep's fescue, Pseudovina and

TABLE 1

Characteristics of Fine Fescues

Type	Species	Height	Spread	Leaf Texture	Chromo. No.	Hour of flower	Typical Varieties	Color
Chewings	*F. rubra* L. subsp. *commutata* Gaud.	low	v. little	fine	42	6 a.m.	Highlight Jamestown Banner	lt. green dk. green med. green
Creeping	*F. rubra* L. subsp. *trichophylla* Gaud.	med.	little	med.	42	2-4 p.m.	Dawson Golfrood	med. green lt. green
Spreading	*F. rubra* L. subsp. *rubra*	mod. tall	good	broader (like Ky. bluebrass)	56	3-5 p.m.	Fortress Ruby Boreal	dk. green dk. green dk. green
Hard	*F. longifolia* Thuill.	low	v. little	fine	42	6-8 a.m.	C-26	dk. green
Sheeps	*F. ovina* L.	low	v. little	wiry	28,42	12 noon	none available	blue-green
Pseudo-vina	*F. pseudovina*	low	v. little	f. wiry			Vendome	v. lt. green
Fine-leaved sheeps	*F. tenuifolia* Sibth.	low	v. little	v. fine	14		Barok	lt. green

Compiled by R.W. Duell and R.M. Schmit, Soils and Crops Dept., Cook College, Rutgers University, 1974.

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TABLE 2

Turf Quality Scores of Fine Fescues in Three Regional Trials at the Rhode Island Agricultural Experiment Station from 1969 - 1982

Selection and Type	1968 Trial 5 Yr Mean 3/4" cut	1968 Trial 5 Yr Mean 1 1/2" cut	1972 Trial[1] 4 Yr Mean 3/4" cut	1972 Trial[1] 4 Yr Mean 1 1/2" cut	1977 Trial[1] 5 Yr Mean 1 1/2" cut
Jamestown - C[2]	7.0	6.6	5.3	5.8	5.9
Atlanta - C	6.7	5.8	—	—	—
Koket - C	6.1	5.8	3.8	5.1	5.8
Biljart - H	5.8	5.5	—	—	6.7
Barfalla - C	6.0	5.4	5.8	5.1	5.8
Halifax - C	5.3	5.4	—	—	—
Erika - C	5.8	5.3	—	—	—
Cascade - C	4.5	4.9	—	—	—
Highlight - C	5.5	4.9	5.2	5.2	6.1
Pennlawn - CR	4.7	4.4	4.2	3.6	—
Chewings - C	4.1	4.3	—	—	—
Oasis - C	4.2	3.9	—	—	—
Oregon D - C	3.4	3.6	—	—	—
Barbantia - C	4.5	3.5	—	—	—
Wintergreen - C	4.2	3.4	—	—	—
Bargena - CR	3.1	3.1	—	—	—
Tjelvar	3.1	3.1	—	—	—
Agio - CR	2.3	3.0	—	—	—
Novorubra - CR	2.4	2.8	3.4	3.4	—
Ruby - CR	3.3	2.8	—	—	—
Barenza - S	2.1	2.2	—	—	—
Durlawn - CR	—	—	3.2	4.0	—
Jade - C	—	—	5.3	6.3	6.4
Barok - S	—	—	2.9	3.4	—
Menuet - C	—	—	6.1	6.7	6.4
Encota - C	—	—	4.4	4.6	5.3
Flavo - C	—	—	4.0	4.3	—
Banner - C	—	—	6.8	6.0	5.8
Oregon K - C	—	—	5.1	5.5	—
Dawson - CR	—	—	3.8	5.1	—
Scaldis - H	—	—	4.0	4.5	6.2
Waldorf - C	—	—	5.1	5.5	6.5
Scarlet - C	—	—	3.4	6.2	—
Roda - CR	—	—	3.8	2.7	—
Boreal - CR	—	—	3.0	3.4	—
Duraturf - CR	—	—	3.1	4.0	—
Polar - C	—	—	5.6	4.0	5.5
Ilona - C	—	—	—	—	6.2
Famosa - C	—	—	—	—	5.9
Agram - C	—	—	—	—	6.4
Grel - C	—	—	—	—	6.1
Sonnet - CR	—	—	—	—	4.9
Kensington - CR	—	—	—	—	5.0
Silyana - H	—	—	—	—	6.6
Waldina - H	—	—	—	—	7.2
Tournament - H	—	—	—	—	5.4
Engina - CR	—	—	—	—	2.7
Enzet - CR	—	—	—	—	3.3
Gracia - CR	—	—	—	—	4.1
Reneva - S	—	—	—	—	4.3
Reptans - CR	—	—	—	—	3.6
Creeping Red - CR	—	—	—	—	3.7
Ensylva - CR	—	—	—	—	5.2

1 Scoring system used is 9 for perfect quality and 1 for dead turf or bare ground.
2 C = Chewings, CR = Creeping Red, H = Hard, S = fine-leaved sheep's.

fine-leaved sheep's fescue, although adapted to extremely difficult and infertile conditions, tend to provide a more clumpy turf of less attractive color. Great varietal improvement still has not occurred, but there is promise for these materials in particularly difficult or infertile situations such as reclaimed lands.

Seeding and establishment

In mixtures with Kentucky bluegrass and/or perennial ryegrass, as much as 50% creeping or spreading fescues by weight appears proper. With Chewings or hard fescues, 20% is often adequate as these grasses become much more competitive. Greater amouunts of fescue seed may be used for shade mixes.

Methods of establishment are similar to those for most turf grasses. Seedlings respond well to establishment fertilizer.

Maintenance

The fine fescues generally mow cleanly and require less management when mowed at heights above one inch than when cut to lower heights. During periods of heat or drought stress, the grasses mow less cleanly and stand appearance may decrease in quality.

Improved varieties are similar to modern Kentucky bluegrasses in their response to heat, dryness and cold. They may go into semi-dormancy during periods of summer or winter stress, but recover readily when growing conditions improve.

The fescues are tolerant of normal summer heat, if moisture is available, and they are extremely winter hardy. Improved varieties hold their color into the winter and are among the earliest of turf grasses to green-up and resume growth in late winter and early spring.

Fine fescues will tolerate drought and persist on much drier soils than will most other cool-season turf grasses. This is a valuable attribute in a time when water is becoming more precious.

Fine fescues are among the most shade tolerant of our lawn grasses but they do not persist long on wet soils whether in sun or shade. When grown in the shade, cutting height should be above two inches and stands should not be fertilized during the warmer months. In fact, feeding once a year, during September or October may be adequate and even optimum for fescues grown in the shade.

Fertility requirements of the fine fescues in all locations are minimal. Once established, one to three pounds

continued on page 56

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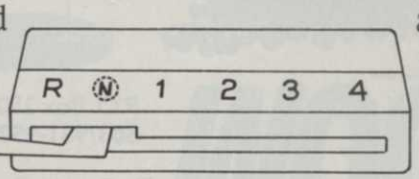

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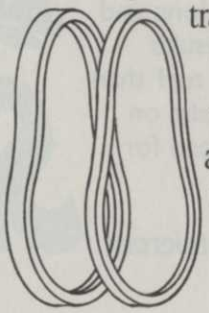

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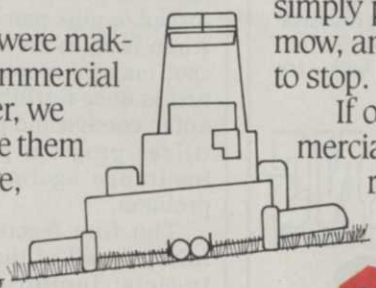

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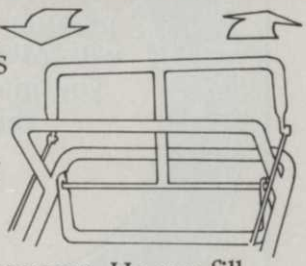

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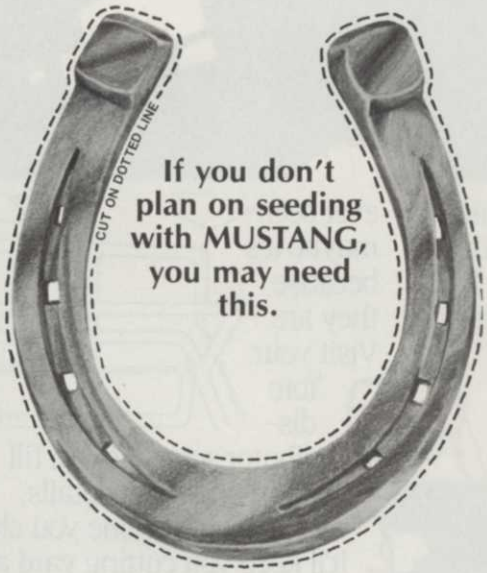

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FINE FESCUES *from page 52*

of nitrogen per 1,000 square feet annually is normally adequate for good growth and color. Fertilizers are best applied during cooler periods of spring or fall.

These grasses remain healthier and more stress tolerant during summer months when they are somewhat hungry. Summer feeding creates a soft or lush condition that makes the grass much more disease susceptible.

TABLE 3
Available Fine Fescues

	Variety	Producer	Circle No.
Creeping Red	Dawson	Northrup King	190
	Flyer	Turf Seed	192
	Ensylva	International Seed	191
	Fortress	Turf Seed	192
	Pennlawn	public	000
	Ruby	Northrup King	190
Chewings	Agram	Pickseed	193
	Atlanta	Northrup King	190
	Banner	Scotts	194
	Highlight	International Seed	191
	Jamestown	Lofts	195
	Koket	Burlingham	196
	Shadow	Turf Seed	192
	Waldorf	Pioneer Hi-Bred	197
Hard and Sheeps	Aurora Hard	Turf Seed	192
	Azay Sheeps	Pickseed	193
	Biljart Hard	Scotts	194
	Reliant Hard	Lofts	195
	Scaldis Hard	Northrup King	190
	Tournament Hard	Pickseed	193
	Waldina Hard	Turf Seed	192

While these fescues are fairly resistant to many lawn diseases, they are most frequently injured by red thread or pink patch and leaf spot. Red thread or pink patch are more serious when fescues are underfed and leaf-spot may be more serious when the turf is over-fertilized. A modest, but not excessive and properly timed fertilizer program provides the best insurance against serious disease problem.

The fine fescues are subject to injury by all of the normal turfgrass insects: including beetle grubs, chinch bugs, sod webworms and cut worms.

Since the most improved of the group are Chewings and hard fescues which do not spread by rhizomes, insect injury can be serious. Damaged areas are very obvious and recovery is slow. This is one reason why fescues are best mixed with sod-forming grasses such as Kentucky bluegrass.

continued on page 92

Fine Fescue for Sure

Alone or in a mixture, Oregon fine fescue rates another look

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The golf car is becoming somewhat more than what its name implies as several manufacturers, in a convincing show of optimism, unveil new top-of-the-line models aimed at getting from Point A to Point B (and not necessarily from tee to green) in style.

1985 looks like a good time, several manufacturers are betting, to enter markets created by the growth and increased popularity of retirement and planned communities.

Joining longtime luxury car maker Elmco with eye-catching models are Yamaha with its sleek Sun Classic and American Continental with its scaled down version of the classic Model T, the Mini T.

"The market seems very strong and we just viewed it as another opportunity. The timing seems good for a variety of applications for our new cars," Gary Jones, manager Leisure Products Division of Yamaha, says. "The market is becoming more segmented and basically its hard to cover all the different kinds of demands with just two models."

Manufacturers realize there is a limited but potentially lucrative market in planned, self-contained residential and resort communities built around golf courses and shopping complexes.

American Continental's Mini-T comes complete with such amenities as an oak dash, AM/FM radio, horn, lights, and turn signals. Available in four colors and in either gas or electric models, the Mini-T has been in full production for almost a year. With a base price of $5,900, the Mini T is definitely not your run-of-mill golf car.

"Some of the golf car market is not affected as much by economics as much as by the weather," one industry spokesman explains. "It's something like owning a boat. If you can afford to own a boat, you don't worry about buying gas for it."

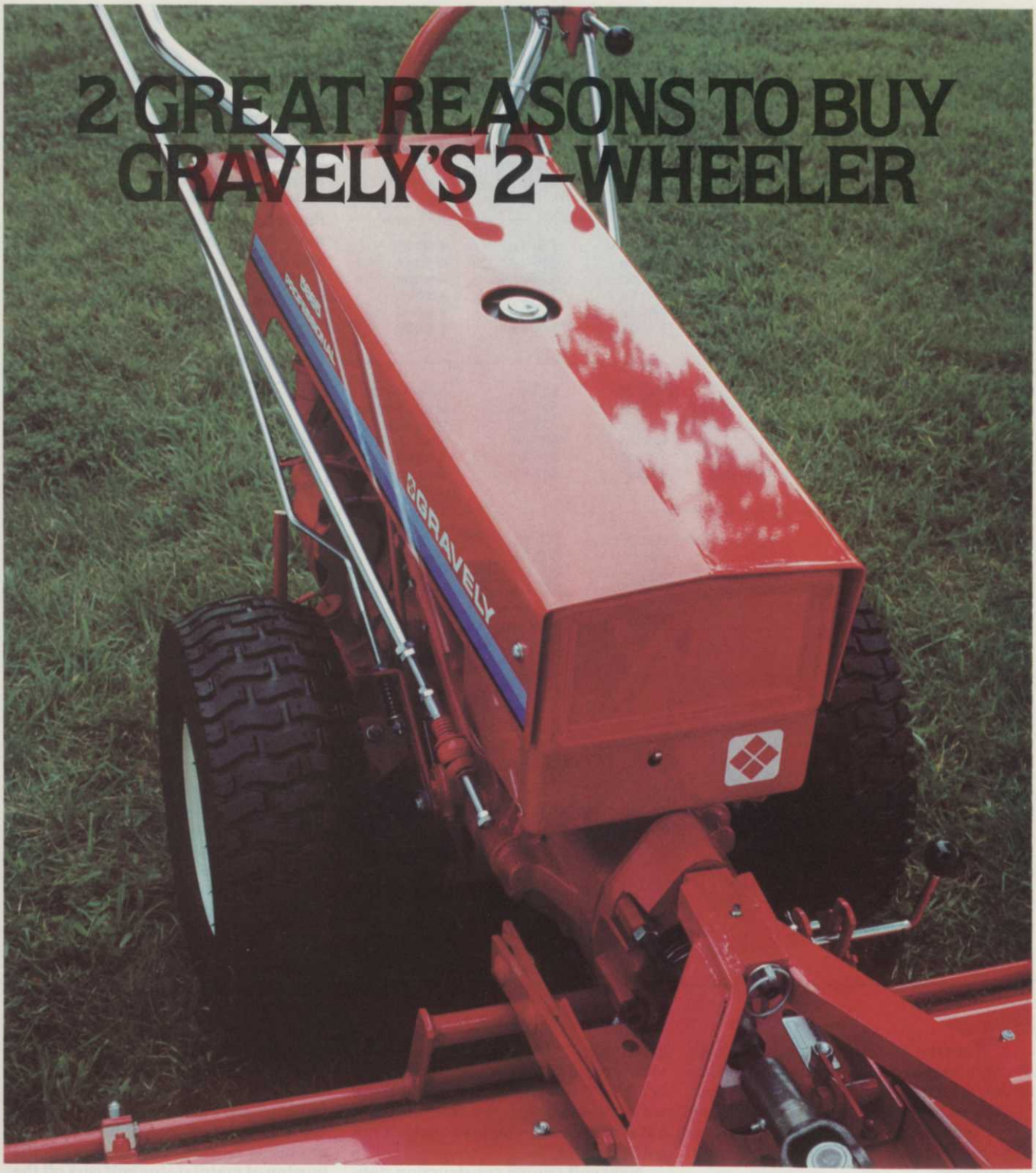
Prestige car maker Elmco is picking up new distributors in its quest for more effective marketing strategies, company spokesman Ed Rutkowske says, and that Illinois-based company is looking forward to a "fantastic" 1985.

But, with an estimated 75,000 new golf cars being sold annually, the bread and butter of the industry will obviously continue to be the utilitarian fleet vehicle; and manufacturers continue to tinker with the design and mechanics of their best selling models to make them both more eye-appealing and efficient.

Turf Vehicles Spurred by Healthier Market, Demand for Luxury Cars

by Ron Hall, assistant editor

Two new golf cart *models from one of the largest golf cart manufacturers, E-Z Go.*



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THE 2-WHEEL GRAVELY SYSTEM

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	Model	Engine	Payload	Notes
American Continental Inc. Box 280 Willmar, MN 56201 *(612) 235-1752*	ACG 400 ACG 4000 ACE 400 ACE 4000	4-cycle 4-cycle electric electric	2,000 lbs. 2,000 lbs. 2,000 lbs. 2,000 lbs.	3-wheel 4-wheel 3-wheel 4-wheel
Club Car P.O. Box 4658 Augusta, GA 30907 *(404) 863-3000*	DS Electric DS Gas DS Villager DS Villager DS Carryall DS Carryall	electric 4-cycle electric 4-cycle electric 4-cycle	750 lbs. 750 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs.	4-wheel 4-wheel 4-wheel 4-wheel 4-wheel 4-wheel
Columbia Car Corp. P.O. Box 1 Deerfield, WI 53531 *(608) 764-5474*	Classic G3T Classic G3S Classic E3T Classic E3S Cruiser G4S Challenger	2-cycle 2-cycle electric electric 2-cycle electric	615 lbs. 615 lbs. 523 lbs. 523 lbs. 716 lbs. 641 lbs.	tiller, 3-wheel steer, 3-wheel tiller, 3-wheel steer, 3-wheel 4-wheel 4-wheel
E-Z-Go/Textron P.O. Box 388 Augusta, GA 30913 *(404) 798-4311*	X440 X444 GX440 X500	electric electric 2-cycle electric	500 lbs. 500 lbs. 500 lbs. 500 lbs.	3-wheel 4-wheel 3-wheel 4-wheel
Melex USA 1201 Front St. Raleigh, NC 27609 *(919) 828-7645*	152 252	electric electric	500 lbs. 500 lbs.	3-wheel 4-wheel
Ross Products 145 NW 20th St. Boca Raton, FL 33431 *(305) 395-4414*	Legend RV3 Legend RV4	electric electric	750 lbs. 750 lbs.	3-wheel 4-wheel
Yamaha Motor Corp. 6555 Katella Ave. Cypress, CA 90630 *(714) 761-7300*	G1-AM5 G1-EM5 G2-A5 G2-E5 SunClassic	gas electric 4-cycle electric electric	1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs.	4-wheel 4-wheel 4-wheel 4-wheel 4-wheel

Yamaha is introducing its first 4-cycle gasoline engine model, the G2-A5, which will be available in April. "We're trying something different and we want to monitor its performance very closely," Yamaha's Jones explains.

Club Car's introduction of a 4-cycle engine car in 1984 met with an "excellent" response, a company spokesman reports.

Melex redesigned its electric cars this past year, coming out with slightly narrower (for easier storage) Turtle 152 and 252 models. In addition to the styling changes, the Melex cars feature a more efficient electrical system and self-adjusting rear wheel brakes. The Raleigh, NC, company is expected to introduce a new car at the PGA show in January.

"We're definitely finding it a pretty good year," C.W. Sharek, executive vice president of Melex USA tells *WT&T*. "Sales are up somewhat and we're pleased with the second half. I have no reason to believe that it's not going to hold."

New golf course construction definitely figures into the marketing plans of manufacturers such as Ross Products, producers of the Legend RV3 and RV4 cars. The Boca Raton, FL, company is located in enviably attractive Palm Beach County where 45 new courses are being added to more than 100 others. Ross had a big year in 1984 and expects sales to be strong at least through 1985.

Lease option

In addition to outright sales, manufacturers, dealers, finance companies, and leasing firms offer cars by lease, often with some type of maintenance agreement written into the contract. The popularity of leasing varies from region to region, and the exact terms of maintenance provisions can be different from course to course.

John Moore at Industrial Leasing, Portland, OR, explains that this segment of the market is subject to ups and downs as well.

"As a third party lessor, we have found our business in turf and golf down the past two years for a number of reasons," he points out. "The first is aggressive leasing programs at very competitive rates from the manufacturers and the dealerships. They see a profit from the sale of equipment and can therefore offer a more competitive rate for leasing. A third party lessor makes his money strictly on the lease."

Daihatsu *introduces a four-wheel maintenance vehicle*

Moore adds that dealerships are adept at arranging attractive rates from local banks or from manufacturer programs, and that leasing or buying decisions are often made by golf professionals. "We have had problems with their credibility".

George Wooley, vice manager of Great Lake Golf Cars, Cleveland, tells the advantage a dealer has in maintenance and service over a third party lessor. "We call on each course once a week to take care of small maintenance items. Then, once per year, we take the cars into our shop for renovation," he says. "The course doesn't have to worry about maintenance and we have as good idea of how the cars are being treated. This also takes the burden of maintaining golf cars off the superintendent's mechanics."

No matter who provides the cars in a leasing agreement, the lessor can reap big savings by making sure the cars are handled properly.

"Some courses really take care of them and some turn them into junk before we get them back," Melex's Sharek notes. "If they have pride in their cars and in what they're doing, they'll be better off and so will we."

Utility market heats up

The introduction of a spate of new products in the utility vehicle market

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Circle No. 239 on Reader Inquiry Card

in recent months could cause buyers to rethink their equipment purchases in 1985, because not only are traditional manufacturers beefing up their product lines (Cushman, the market leader for over a decade, is putting more muscle in its vehicles by going from an 18 to a 22 hp engine) but foreign manufacturers are entering the marketplace with some vigor.

"They've had a captive market for years," Lee Rinehard of Terrain Vehicles, Inc, East Coast distributor of Daihatsu maintenance vehicles, says of the traditional utility vehicle producers. "But, we've come in with a strong product at a competitive price and we'll be right up there too. We're knocking at their back door and they know it."

In addition, Honda, Yamaha, Suzuki, and Kawasaki are encroaching on the market from a different direction, initially with sporty and relatively inexpensive three-wheel ATCs, most recently with more work-oriented four-wheel vehicles. Cost and the growing availability of optional work attachments are making these vehicles attractive for specialized maintenance tasks and for running errands.

It's this diversity which will cause buyers and users of turf vehicles to think long and hard in an attempt to match purchases with jobs in 1985

Does this mean the "workhorse" type of turf vehicle is losing its popularity? Probably not. It is a signal, however, that competition for sales in specific equipment—applications performed in the past by the "workhorse"—is going to be red hot.

Versatility, even in this day and age, is certainly no dirty word, Dan Hedglin, sales manager for turf and industrial vehicles at Cushman/OMC, stresses. The demand for equipment that fulfills many work functions is still strong. Cushman, of course, built its reputation on its workhorse vehicles.

"We expect a strong year," he says. "We've had an excellent year this year. There are probably a couple of reasons for this. The economy has come back significantly although we didn't see it affect the turf industries as much as other industries. And we enjoyed sales increases because of product improvements." Hedglin says Cushman, in addition to boosting the horsepower of its vehicles, is committed to making its vehicles

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Lester Electrical (chargers)
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Lincoln, NE 68522
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Nivel, Inc.
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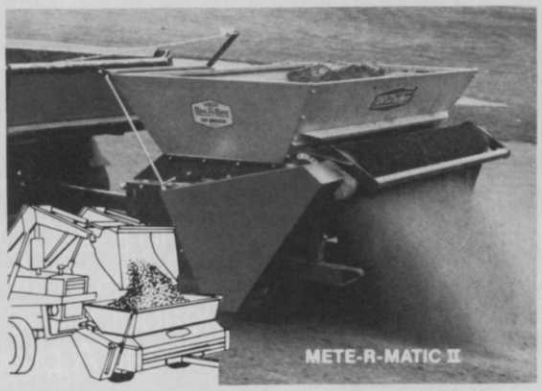

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	Model	Engine	Payload	Notes
American Continental, Inc. Box 280 Willmar, MN *(612) 235-1752*	EVC-2 EEVC-2	17 hp electric	980 lbs. 1,120 lbs.	3-wheel (4-wheel optional) 4-wheel vacuum cart
American Honda Motor Co., Inc. 100 W. Alondra Blvd. Gardena, CA 90247 *(213) 327-8280*	TRX200	4-cycle	456 lbs.	4-wheel
Columbia Car Corp. P.O. Box 1 Deerfield, WI 53531 *(608) 764-5474*	Utility Car	250cc gas	500 lbs.	4-wheel, disc brakes
Communter Industries, Inc. P.O. Box 309 Cascade, IA 52033 *(319) 852-3207*	340 Granger Sasquatch 340	4-cycle 4-cycle	600 lbs. 600 lbs.	3-wheel 3-wheel
Cushman/OMC P.O. Box 82409 Lincoln, NE 68501 *(402) 475-9581*	Model 530 Model 531 Model 532	22-hp gas 22-hp gas 22-hp gas	1,700 lbs. 1,700 lbs. 1,900 lbs.	3-wheel 3-wheel 4-wheel
EquipTech Products, Inc. 615 Shepherd Drive Cincinnati, OH 45215 *(513) 733-4770*	Chikazu GX12B	.7-hp gas	1,100 lbs.	4-wheel
E-Z-Go/Textron P.O. Box 388 Augusta, GA 30913 *(404) 798-4311*	GX-800 GT-7 X300 GX300 PC4	2-cycle 4-cycle electric 2-cycle electric	800 lbs. 1,500 lbs. 500 lbs. 500 lbs. 800 lbs.	4-wheel 3-wheel 3-wheel 3-wheel 4-wheel
Hahn, Inc. 1625 N. Garvin Evansville, IN 47711 *(812) 428-2027*	Spray-Pro 44	.16-hp gas	1,500 lbs.	4-wheel
Carl Heald, Inc. P.O. Box 1148 Benton Harbor, MI 49022 *(616) 849-3400*	Mark Hauler Hauler Kits	4-cycle gas 4-cycle gas	not given 650 lbs.	3 or 4-wheels 3 or 4-wheels
Jacobsen/Textron 1721 Packard Ave. Racine, Wi 53403 *(414) 637-6711*	T1000 T2000	gas gas	1,000 lbs. 2,000 lbs.	4-wheel 4-wheel
Kawasaki Motors Corp. P.O. Box 11447 Santa Ana, CA 92711 *(714) 835-7000*	KLT250	4-cycle gas	361 lbs.	3-wheel

continued next page

even more maintenance-free than in the past.

Jacobsen strengthens its offerings with a pair of new utility trucks, the T1000 with a 1000-lb capacity and the T2000 with a 2000-lb capacity and a variety of optional attachments that can convert it to a mini dumper, aerator, seeder, spreader, top dresser and sprayer.

Taylor-Dunn offers its new 2,000-lb. capacity B 2-10 model with an exclusive speed control that increases the running time and distance of the vehicle up to 30 percent. It can be

The all-terrain Yamaha 200 *four-wheel reverse shaft all-purpose vehicle.*

adapted to seat two and four passengers with a cargo area, or seat six passengers comfortably.

Further evidence that the workhorse-type vehicle should remain popular is Smithco's new Runaway turf maintenance truck which got its first production run this past summer. Smithco's Donald Smith feels the Runaway, which features a hydraulic drive train, is also an example that reducing maintenance costs, even at the expense of a slightly higher initial cost, will become increasingly important.

"People don't seem to mind spending the extra money for fewer maintenance costs, for less down time," he explains. "The whole industry will be going more into hydraulics we feel."

Even though Smith doesn't feel the introduction of new foreign products has made a major impact on the market yet, particularly in the East, he cautions traditional manufacturers from taking it too lightly. "If we don't see the direction the industry is going and take steps to stay with it, four or five years down the road we're going to get hurt," he notes.

Notable among the newcomers to the market are such companies as SNS Motor Import, Oxnard, CA, which became the distributor of the Sanfu line of equipment last January, Terrain Vehicles, Inc., Addison, IL, the East Coast Distributor for Daihatsu, and EquipTech Products Inc., Cincinnati, OH, sole U.S. distributor for the Chikazu line.

The Sanfu line is anchored by the

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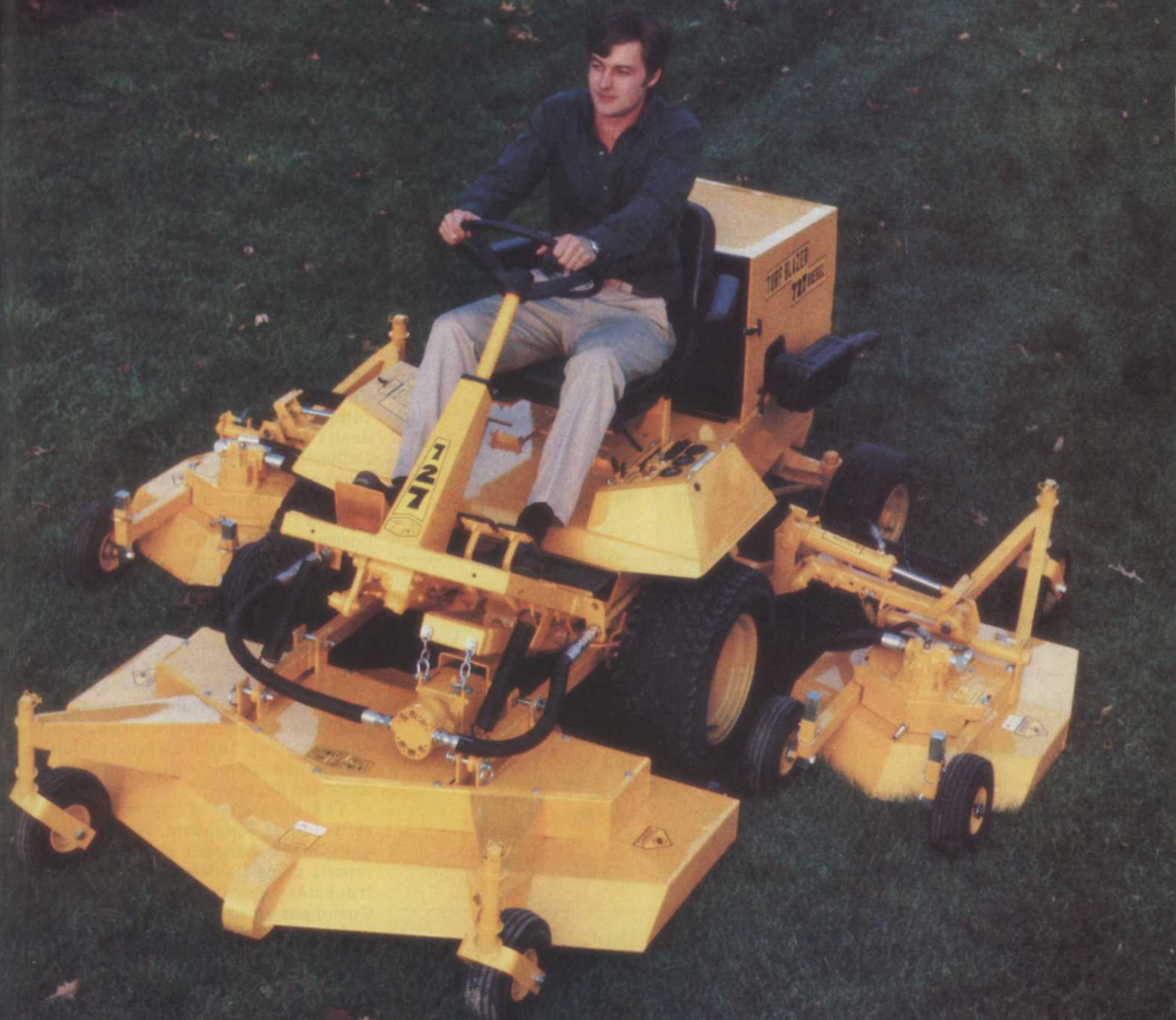

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	Model	Engine	Payload	Notes
MFC, Inc. 10 Pleasant St. New Rochelle, NY 10801 *(914) 636-3834*	Shrunkette	16-hp gas	not given	4-wheel
Olathe Manufacturing, Inc. 100 Industrial Parkway Industrial Airport, KS 66031 *(913) 782-4396*	Model 492	18-hp	1,500 lbs.	3-wheel
Pargo Eagle 8181 Hoyle Ave. Dallas, TX 75227 *(214) 388-7431*	Model 775 Model 830 Model 875	electric electric electric	1,200 lbs. 350 lbs. 2,000 lbs.	4-wheel 3-wheel 4-wheel
Rokon LTD P.O. Box 427, Rt. 202 N. Jaffrey, NH 03452 *(603) 532-8335*	Ranger	2-cycle	450 lbs. pull	2-wheel drive
Smithco, Inc. 11 West Ave. Wayne, PA 19087 *(215) 688-4009*	Runaway Red Rider	19-hp gas 8-hp gas	1,500 lbs. 500 lbs.	3-wheel 3-wheel
SNS Motor Imports, Inc. 500 Esplanade Drive Oxnard, CA 93030 *(805) 485-3300*	TPV600	27-hp gas	1,500 lbs.	4-wheel
Taylor-Dunn 2114 West Ball Road Anaheim, CA 92804 *(714) 956-4040*	Model B 2-10	electric	2,000 lbs.	4-wheel
Terrain Vehicles, Inc. 221 Mitchell Court P.O. Box 418 Addison, IL 60101 *(312) 953-8747*	Hijet	LP gas	1,500 lbs.	4-wheel
The Toro Company 8111 Lyndale Ave. Minneapolis, MN 55420 *(612) 887-8805*	Workmaster	14 hp gas	1,000 lbs.	3-wheel
Turf-Vac Corp. P.O. Box 90129 Long Beach, CA 90809 *(213) 426-9376*	Model 1 Model 2 Model 4 Model 6 Model 8	11-hp gas 18-hp gas 18-hp gas 18-hp 18-hp	1,100 lbs. 1,500 lbs. 1,500 lbs. 1,500 lbs. 1,500 lbs.	3-wheel 3-wheel 3-wheel 4-wheel 4-wheel
Yamaha Motor Corp. 6555 Katella Ave. Cypress, CA 90630 *(714) 761-7617*	Moto 4	4-cycle gas	331 lbs.	4-wheel
U.S. Suzuki Motor Corp. 3251 East Imperial Highway Brea, CA 92621 *(714) 996-7040*	Quadrunner 250	4-cycle gas	370 lbs.	4-wheel

TPV600 (turf personnel vehicle) which features a 27-hp, water-cooled engine, rack and pinion steering, and a 12-month, 12,000-mile limited warranty. Even though sales of Sanfu (the vehicles are manufacturered in Taiwan) have been primarily in the West so far, SNS Motor Imports is putting together a national dealer network.

"Our first year in 1984 was a building year," Tony Nunez of SNS Motor Imports says. "We knew a lot of the vehicles we would sell would be initial inventory and we expect a lot of reorders. We're looking at having a good year in 1985. We've been able to attract quality dealers and that was our goal, good solid dealers that have been in business a long time."

Likewise looking to the coming year with unabashed eagerness is Rinehard of Terrain Vehicles, a new company that oversees 19 Daihatsu dealer points in 15 states. Although Daihatsu vehicles have been on the market for a number of years, Rinehard feels the quality of the product and the parts support system his company provides will make Daihatsu a more noticeable force in the utility vehicle market.

"We have a high 90 percent parts/fill ratio," Rinehard stresses. "The complaint that foreign products have a parts problem is old hat, a good sales trick. We can can fill any order for any part." Daihatsu products are supported by Suburu Mid-America, parent company for Terrain, which maintains a complete supply of parts, Rinehard explains.

The diversity of the market is reflected at Pinehurst, NC, where equipment manager Richard Yow reports using Daihatsu vehicles in a truckster capacity while retaining Cushmans for use on the greens.

Joining the utility vehicle sales fray this September was EquipTech Products with its Chikazu line of 15 different vehicles ranging in size from a motorized wheelbarrow to an eight-wheeled-drive vehicle with a two-ton payload. Included in this array are the GX12B and GX15B mini dump trucks.

"We can cover a number of markets with our products," EquipTech's Joe Engelbert says. "Some of them overlap and some of them don't." Engelbert is looking to a strong debut for Chikazu. "It's one of those things you feel like you should have been in a year ago," he notes.

With the ringing of the bell signifying the start of the 1985 selling season there is no lack of challengers to the traditional utility vehicle leaders; and if they can't win the bout, it might be that they'll be satisfied to win a round or two. At least for now. **WT&T**

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Circle No. 116 on Reader Inquiry Card

Walking through a local garden show, most consumers have no idea what effort goes into the exhibits by various landscape contractors. They say to themselves, "I paid four bucks to get into this commercial advertisement, so it better be good!"

Little do they realize the display set-up alone can come close to 250 hours. And, the cost of a display can range from $1,000 to $35,000.

Taking into consideration the time, money and hard work put into it, one might wonder if being in a garden show is worth it. Although the reasons for being in shows vary from landscape contractor to landscape contractor, most agree the event is a worthwhile one.

"The incentive for being in a garden show is just very simply the hope of achieving some leads in a very off-time of year," Bob Kinney, vice president in charge of landscaping and nursery division, Wilmore Gardens, Denver, CO, remarked. "Any time you can encourage any type of current or potential customer contact, it's very critical."

"Because it's very cold and wet here, it gets the customers thinking about spring," Lambth Marshall, president, Associated Landscape, Inc., Hoyt Court, NC, explained. "All you need is one really good customer. That one customer can turn around and give you 25 customers in the next year."

Being in a show often represents credibility and is a sign of prestige, according to Greg Ash, co-owner and architect, Barker-Ash Landscape Design, Indianapolis, IN.

"I think it lends more credibility to you. The promoters of an established show will only let companies exhibit they know can do the job and present something that's going to look nice."

Russell Jones, president, J. Franklin Styer Nurseries, Concordville, PA, agrees. "People recognize immediately you're a good contractor. The show itself has a lot of stimulus and is pretty prestigious."

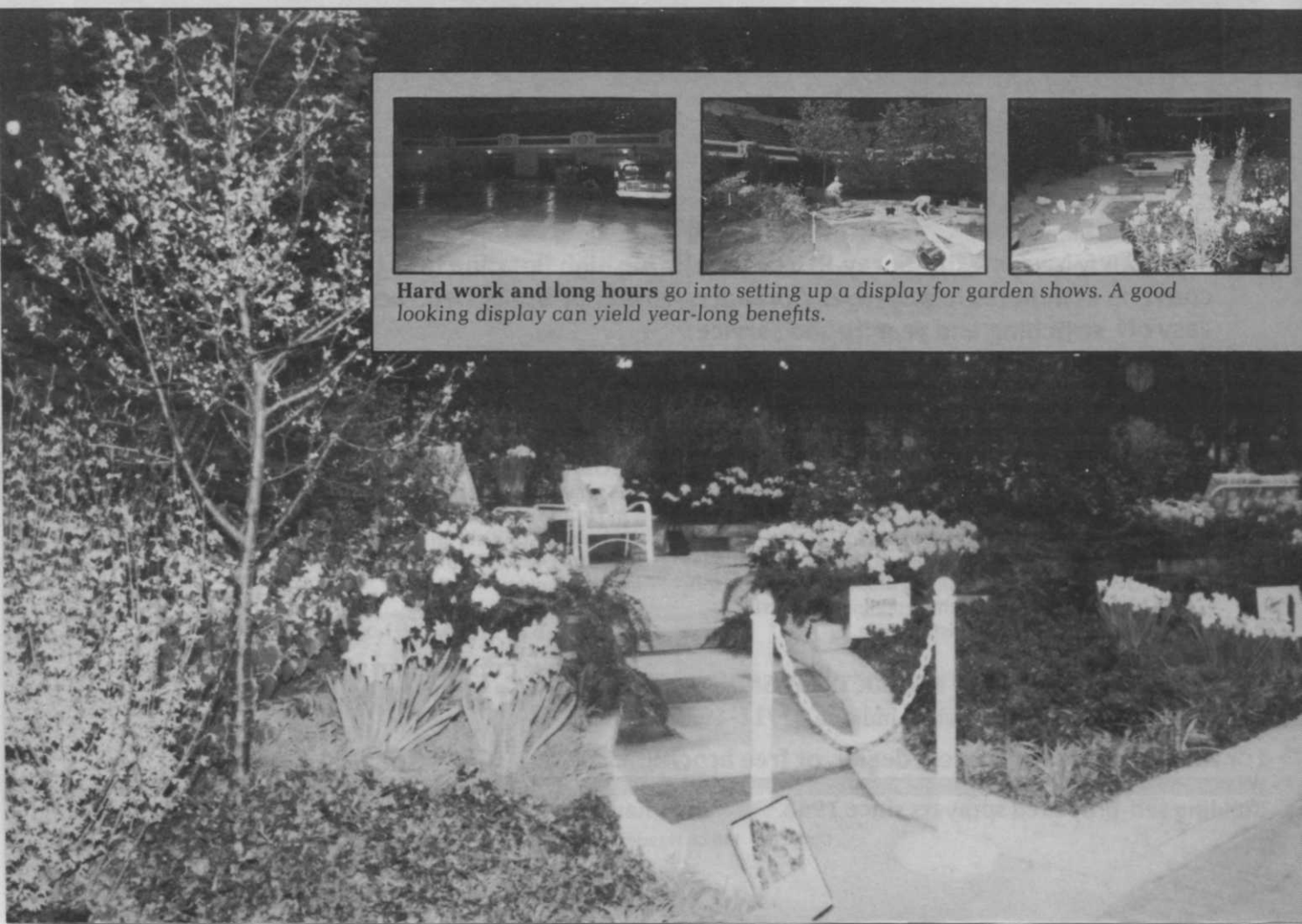
However, Rick Solo, owner of Solo Design Group, Charlotte, NC, believes the prestige of a garden show is questionable.

"I used to think the show was prestigious, but I don't anymore. What I have noticed over the years is the quality of the garden displays really

Putting it on the line for customers, architects, and suppliers.

Garden Shows

by Nedra Stalter, HBJ Publications, editorial assistant



Hard work and long hours *go into setting up a display for garden shows. A good looking display can yield year-long benefits.*

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Barnes Nursery & Garden Center, Inc., *Huron, OH, won Best of Show at the 1984 Home and Flower Show in Cleveland.*

seems to have gone downhill. It seems to me a lot of the stronger companies are not participating like they used to. I think it may have something to do with whether you get work out of the show. Generally, if you get work out of the show, it is residential and some companies are beginning to move away from the residential market," Solo explained.

Some landscape contractors see the show as a place to invite customers they will be working with in the upcoming season.

"A lot of work that comes out of the shows is getting ready for spring. We arrange to meet clients at the show and take them around as our guests. so, the show is also a sales tool," Jones said.

For others, the show is a way to get together with former customers and talk about updating gardens.

"We use it to see old clients because they are continously updating their gardens. It's been over a 26 year span because Mr. Loonsten (the owner) has done 26 consecutive shows," Jeannie Loonsten, office manager and vice president, Frits Loonsten Inc., Indianapolis, IN, said. Of course, you have to make a point to keep track of your old customers.

"It is also an educational tool to show people our style," Loonsten said. Style goes beyond the simple how-to of do-it-yourselfers.

Professional exposure is also received at a garden show, according to Mike Spena, president, Spena Landscaping, Highland Heights, OH.

"The incentive of the show is exposure; the people see the garden and it reinforces their idea of us. But, it also gives us professional exposure. It promotes the image within the industry. You get to know a lot of people and, if you're not there, I think you miss some of the association."

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Solo also finds professional exposure a reason to attend the show. "One of the things I have found most beneficial about the show in terms of contacts and exposure is not so much the general public as with other people in the trade. It's almost like a reunion of sorts where you reestablish a lot of business contacts with suppliers, architects and designers, or contractors. I find this to be particularly worthwhile," Solo remarked.

Does the garden show really provide many leads? Rich Baron, president of Suburbun Landscaping, Inc., Berea, OH, thinks so.

"I was in a position years ago that I was bidding against people at the show and wasn't getting anything. I wondered why the builders knew so much about the other contractors. I looked into it more and found out they knew more about the contractors because they stopped into the Home and Garden show and talked to them," Baron explained.

"These guys in business don't want to have you come to their office, and try to sell your product. But, if they can talk to you on a Friday night for 20 minutes in a relaxed atmosphere and get an idea what you're about and what you can offer, they tend to remember that more so than somebody pounding them with all kinds of mail," Baron said.

Loonsten has also seen an increase in the number of leads from the show, especially in the last few years.

"We find that we are getting more and more direct leads from the show. Originally, we didn't. People kind of put it in the back of their minds. It was kind of a goal. They'd always say,'When I can afford to do this, I'm going to have Frits Loonsten do it. Now, it's more direct from the show," Loonsten said.

"The incentive for being in a garden show is just very simply the hope of achieving some leads in a very off-time of the year."

However, Solo says it depends on the year where he is concerned. "It really varies from year to year. There are some years we get a tremendous volume and there are some we get

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Wilmore Nurseries' *exhibit at the 1984 Colorado Garden & Home Show.*

none at all. It's really difficult to say what the controlling factor is. The thing about the local garden show here is the percentage of people who are realistically potential clients is very small because you're talking about a cross section of the general public whereas our clientele is not such a broad cross section," Solo explained.

Getting leads from the show isn't the reason to display, according to Spena. "If you look at it as leads, it's like saying 'how many dollars can I make?' That's not the reason to be in the show. I worry if the garden looks good."

Is a local garden show really worth all of the time and hard work?

Loonsten, whose business may spend up to $35,000 at the show each year, thinks so. "We lost very little from our show. We couldn't afford to lose a lot."

"The incentive of the show is exposure ..."

But, Jim Grabo, president of Highlands Hardware & Nursery, Denver, CO, disagrees.

Solo takes it year by year and has started to diversify his gardens.

"One of the attitudes we've taken with our local garden show is that it's an opportunity to do something unique.

We don't want to do traditional things anymore. It might not be widely accepted, but if nothing else, it would show that we have diversity. That'a probably a little riskier approach, but we figured the garden show was a safe place to take the gamble." **WT&T**

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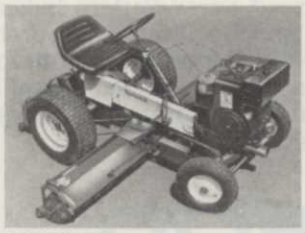

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Ken Kubik and Bert Jones, owners of Grass Roots, a golf supply business in New Jersey, believe the best way to keep customers is to keep them happy with quick and reliable service. Their formula's working; sales have increased seven times since the company was founded six years ago.

Back to Basics

by Maureen Hrehocik, managing editor

Ken Kubik's corporate *philosophy is to provide quick and efficient service to his customers.*

Ken Kubik's original career plan was to become a minister. A stint on a golf course at age 12 changed that.

Today, Kubik's partnership in a metropolitan New York golf course supply wholesaling business is flourishing and the 39-year-old credits his golf course "hands on experience" as invaluable in making that happen.

From caddy, Kubik progressed to other jobs around the course and finally became assistant superintendent at Crestmont Country Club in West Orange, NJ, assisting course superintendent Peter Pedrazzi. That job lasted 14 years.

"I had thought about becoming a minister, and I had thought about majoring in labor management, philosophy, anthropology or sociology, but after working on the golf course for so many years, my true love was turf. I loved the job because it wasn't sedentary."

But when Kubik was in his 30s, he felt it was time for a change.

"I had been at the golf course since 1973 and had worked as a sales manager at Andrew Wilson in New Jersey and felt myself reaching a plateau."

Kubik did a lot of soul searching and felt his ideas and energies could best be developed through starting his own business.

"The name for the business, Grass Roots, kind of developed naturally. For me, this decision was getting back to basics, and I wanted my business to reflect that," explained Kubik.

So, in December of 1978, Grass Roots was founded.

Controlled growth

Kubik's current business gives him everything but time to be sedentary.

He and his partner, Bert Jones, make about 42 sales calls a week. Grass Roots services about 150 golf courses in a 75 mile radius of the firm's home base of Mt. Freedom, NJ.

"Everything they say about starting a business is true," says Kubik.

"Even though I've been around golf courses my whole life, you still have to prove yourself and get reaccepted in a new position. It's as much selling yourself as your products."

Grass Roots represents Royal Coach-Buckner, Swan Hose, Lebanon Country Club Fertilizer, Aquatrols Aqua Grow, Lofts Seed, Mobay Standard Golf Company's Pro line, Par Aide golf products, Milliken's Blazon and PeneTurf, among other lines.

Kubik is very conscious about controlled growth for the company. He does not want to expand his lines only for the sake of expansion. The same holds true for the territory he covers.

"It's very important to us to fill our current commitments and to provide the type of service we've become known for before branching out anymore."

Sales since the company was founded have gone up seven times. Kubik reports 30 percent more growth this year than last year. He and Jones are considering some plant expansion and warehouse improvements.

"This market has been competitive and will continue to be competitive," Kubik predicts. "Experience is extremely important. I consider myself an ever-changing constant. We want to give better service every time we go out. It doesn't matter if the order is for a caseload of chemicals or a tee marker, superintendents in this area

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are used to getting things when they need them."

Kubik estimates he is competing with anywhere from 12 to 18 firms in a 75-mile radius.

Quickness is one of the attributes Grass Roots arms itself with to combat the competition.

"This is not only a competitive area sales wise, but also among golf courses," Kubik says. "When a superintendent needs something he needs it *now*. We react to the situation."

Kubik and Jones make up the company's sales team. Their wives take care of the office and bookkeeping work. The company also employs three deliverymen.

Kubik says he and Jones enjoy a special kind of business relationship in that it is a true partnership—decisions are made together and there are no petty rivalries.

I can't express the respect we have for each other," says Kubik of his partner.

Before joining Kubik, Jones was a vice president at Andrew Wilson and a sales manager at John Manville.

On the road

Grass Roots is a firm believer in trade shows. Kubik says his company goes to shows for visibility and to pick up new lines.

"It's a good way to get to know the manufacturers and for the manufacturers to get to know you. If you don't get off on the right foot with manufacturers, it can break you."

Another area where Kubik feels the industry can be broken is in federal regulations.

Kubik plans to continue developing his company through his "elastic band theory."

"The federal government is overregulating the professional," he says. "The professional shouldn't be penalized because of the incompetence of others. This industry doesn't need alarmists."

Kubik feels the best interests of the industry can be served through local and state legislators and industry associations.

"We really are self-regulating and licensing dealers and superintendents."

What's ahead

Kubik plans to continue developing his company through his "elastic band theory"; that of slow, controlled growth.

"We will become even more solidified, stronger and with more credibility," Kubik predicts.

And did starting his own business fulfill that niche Kubik felt in his 30s?

"More than I ever anticipated," he says. "I'm a more complete person. You get physically exhausted, but it's exciting. There's something about having your own business—you cause and solve your own problems."

Besides pumping hours into the business, Kubik says it's important to him to find time for his wife and four children and to play tennis, soccer and handball. (He was town tennis champ six times.)

Kubik and Jones have another company philosophy that they credit to the firm's steady growth. According to Kubik, "We limit ourselves to making the same mistake only once." **WT&T**

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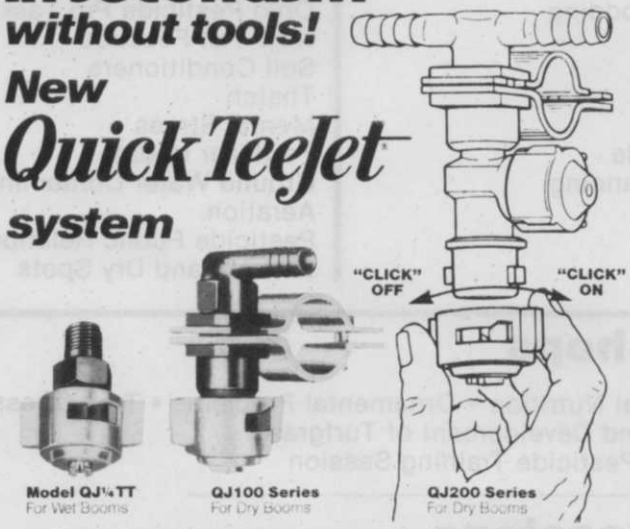

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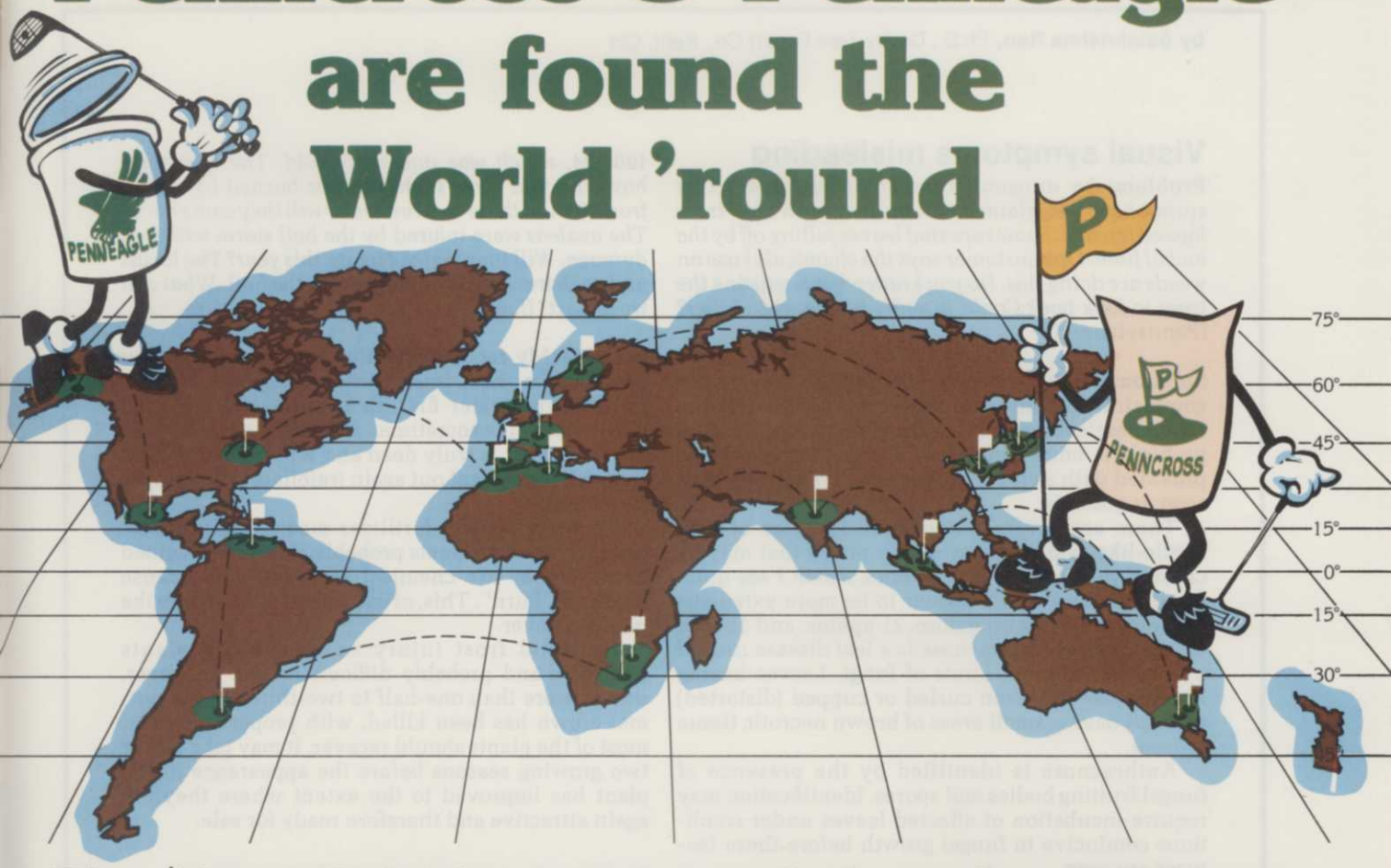

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PROBLEM SOLVERS

by Balakrishna Rao, Ph.D., Davey Tree Expert Co., Kent, OH

Visual symptoms misleading

Problem: *An unusual number of customers this spring have complained that the leaves on their trees looked terrible. Some reported leaves falling off by the end of June. One customer says the chemicals I use on weeds are doing this. Do you know what is causing the trees to look bad? Could it really be the weed killer? (Pennsylvania)*

Solution: It is very important to respond to customer complaints like these. In nearly all cases where the right chemical was used in the right way, the actual problem is nonchemical. The customer should be provided with a clear explanation of the problem as soon as possible.

There are several nonchemical causes of herbicide-like symptoms on woody plants that may be causing your problems. The ones which I see quite frequently and which appear to be more extensive this year are: 1). anthracnose, 2). aphids, and 3). cold or frost injury. Anthracnose is a leaf disease caused by several different kinds of fungi. Leaves having anthracnose are often curled or cupped (distorted) perhaps having small areas of brown necrotic tissue present.

Anthracnose is identified by the presence of fungal fruiting bodies and spores. Identification may require incubation of affected leaves under conditions conducive to fungal growth before these features are seen.

Aphids are small, soft-bodied insects which suck plant juices. Some, but not all, aphids have been found to produce substances chemically similar to plant growth regulators. The end result of aphid feeding is distorted foliage -- cupped, curled, crinkled, and/or undersized leaves. These symptoms are similar to herbicide injury. However, you will be able to find honeydew (a sticky, sugary, aphid excrement), skins, eggs, or the insects themselves when aphids are involved. It may require a hand lens or microscope to clearly see aphids, or other insect signs.

Low temperatures also produce foliar symptoms which mimic herbicide damage. Low but not killing temperatures result in crinkled or wrinkled leaves. Frost and freezing temperatures kill tissue turning it black or dark brown. The entire leaf may not be destroyed and the blackened tissue may be found only at the growing tips and margins of the leaf.

The foliage in question can, and in cases of possible litigation, should be analyzed for the presence of herbicide. There are laboratories which for around $50 or more can detect and identify the more commonly used herbicides.

"Wait and see" is best approach

Problem: *We have around 500 boxwood plants and a number of Sunburst locust, flowering crab, redbuds, and azaleas in our nursery. These were damaged by a hail storm and cold temperatring the winter of 1983-84, which was unusually cold. The boxwoods have the first three inches of tips burned by sun or frost. Should these be trimmed or will they come back? The azaleas were injured by the hail storm with bud damage. Will they leaf out again this year? The locust and crab trees show damage from the hail. What can we expect? (Iowa)*

Solution: My recommendation for the damage you describe; i.e., hail, frost, winter injury, would be to fertilize and water first, then prune out the dead tissue later. It is sometimes difficult to determine in the field what is truly dead and will not come back from what may leaf out again (refoliate) after proper treatment.

To some people, fertilizer means an inorganic product. Such products probably should be avoided because they are chemical salts and could cause fertilizer "burn". This, of course, would not help the plants recover.

Hail and frost injury can make the plants unsightly and probably difficult to sell. However, unless more than one-half to two-thirds of the normal crown has been killed, with proper treatment most of the plants should recover. It may take one or two growing seasons before the appearance of the plant has improved to the extent where they are again attractive and therefore ready for sale.

Best trimming time varies

Problem: *What time is the best for trimming trees February, March or in the winter? (Michigan)*

Solution: With the exception of trees which "bleed" readily, trimming and especially the removal of small, dead or dying branches can be done nearly any time.

Maples, birches, and elms are bleeders and should not be trimmed during the period of bud break and leaf development. Bleeding seems to be less of a problem when the tree is trimmed in the fall and early winter rather than in late winter or early spring. In fact, it is best for most kinds of trees to prune them after the spring flush because when the cambium is active, the bark is loose and can be easily torn.

Broad-leafed (deciduous) species in general can be trimmed without harmful results after leaf fall but before bud break. Needle-bearing trees (conifers) are set back the least when pruned just prior to bud break. From a disease standpoint, specifically Dutch elm disease and oak wilt, elms and oaks should be trimmed in late fall or early winter.

Trees infected with or susceptible to fire blight should never be pruned when the plant is wet. Doing so spreads the bacteria which cause fire blight. Fresh wounds caused by trimmings can attract insects,mostly beetles, some of which carry disease from tree to tree.Thus pruning when the adult insects are active increases the chances of spreading certain diseases and should be avoided.

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With just one fungicide — DUOSAN — you can control 17 disease problems on turf, trees, and shrubs!

Dymet is Mallinckrodt's double-action insecticide. It delivers a quick kill upon contact, then provides long-lasting residual control.

Dymet is effective against surface insects such as Cutworms, Chinchbugs, and Sod Webworms, and can also be mixed for use on sub-surface pests. In addition, it controls a wide variety of insects on trees, shrubs, and ornamentals.

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For more information on Duosan, or Dymet, or both, call Mallinckrodt toll-free. Or, contact your Mallinckrodt distributor. You might eliminate a long list of problems all at one time!

Circle No. 128 on Reader Inquiry Card

PRODUCTS

Bunton spreader covers 16-ft path

The Bunton multi-purpose commercial spreader evenly distributes grass seed, fertilizer and sand over a 16-ft-wide path. The unit features a 130-pound capacity stainless steel hopper, stainless steel blower-spreader and heavy guage steel handles.

The 2.3 hp, 4-cycle Robin engine

propels the spreader at speeds of up to 2 mph. Finger tip steering controls provide easy steering and excellent maneuverability.

Circle No. 190 Reader Inquiry Card

Honda's lawn tractor is built for safety

At the touch of a lever the blade almost immediately stops the 38-inch twin blade without stopping the engine, one of several safety features on Honda's new HT3810 lawn tractor. As an added precaution, the blade must be disengaged before the engine will start, and a weight-sensitive switch is located in the seat, preventing operation unless the driver is seated at the controls.

The HT3810 comes with a mechanical autoclutch transmission that allows shifting with the touch of a lever, an electric starter, and an electronic ignition.

The new Honda tractor is equipped with a G400-type engine and a shaft-drive system and features a cast iron cylinder sleeve, ball-bearing supported crankshaft and a chrome top piston ring.

The HT3810's versatility is increased with a front PTO pulley and rear hitch plate which can be hooked up to a variety of attachments. Other features include a high-vacuum cutter housing with provides clean cutting and effficient discharge action, and adjustable cutting height at the touch of a lever.

Circle No. 191 on Reader Inquiry Card

Irri-Trol's SMC is versatile controller

In addition to its functions as part of Irri-Trol's Master and Satellite System, the SMC-12, 18, 24 Series Turf Controllers are versatile and reliable units designed for independent operation.

Advances in Turfgrass Pathology

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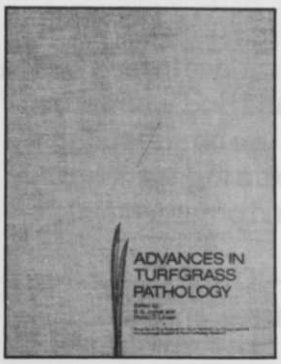

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Circle No. 192 on Reader Inquiry Card

Mesto portable sprayers come in three sizes

Peco Sales, Inc., introduces three models of Mesto portable pressure sprayers for both professional and consumer use. These sprayers can be used for herbicides, fungicides, liquid fertilizers, animal repellents, and biological spraying agents.

The Model 3539 backpack sprayer features a 4 1/2-gallon capacity and an adjustable pressure regulator that assures constant spray output and droplet size. The Model 3265 has a 1.3-gallon capacity and the 3268 a 2.1-gallon capacity. All three models have high-density, polyethylene tanks and pumps as well as all-brass wands and nozzles. Each has a tank-mounted pressure gauge and safety valve to vent excess pressure.

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Bunton offering winter attachments

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Circle No. 241 on Reader Inquiry Card

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EVERY PROFESSIONAL KNOWS THAT QUALITY IS STILL THE MOST IMPORTANT ELEMENT IN ANY COMPLETE TURF CARE PROGRAM. Let's face it - low price is no substitute for poor product. Challenged by tough turf problems together with rising costs, you just can't afford to play games with products that don't perform consistently and economically. You need quality turf products you can depend on.

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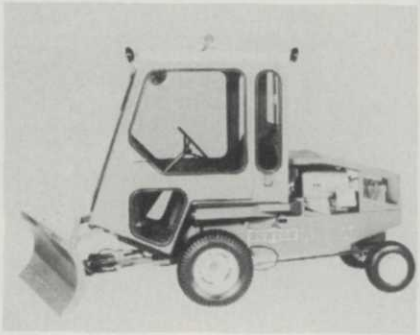
OSHA regulations. Standard features include two removable doors, sliding rear window, safety glass all around, seat belts, head and rear service light, interior dome light, flashing amber



beacon, windshield wiper and defroster. Optional features include heater kit, air conditioner and emergency lighting kit.

Optional attachments include rotary broom, snow blade, snow plow and snow thrower. All attachments are 60 in. wide.

Circle No. 194 on Reader Inquiry Card

SNOW REMOVAL *from page 30*

Brooms play a role

Although most professional snow removers use either large blades or plows to push the snow or spinning metal augers to throw it (or a combination of blade and blower), sweeping with a rotary broom is better in some situations. This became apparent to millions of television viewers a few winters back when a Sweepster motorized sweeper spun onto the articifial turf at stadium at Foxboro, MA, whisked a neat little swath through the snow, enabling the New England Patriots to kick a last-second field goal to defeat the Miami Dolphins in a National Football League playoff contest.

These brooms, with their spinning polypropylene bristles, can be quite handy when removing snow from decorative pavers, artificial turf, grass, and other surfaces that could be damaged by a rigid blade. They come in a variety of sizes, from walk-behind models to Sweepster's four-foot diameter sweeper (requiring over 300 horsepower just to power the brush) that clears a 20-ft path. **WT&T**

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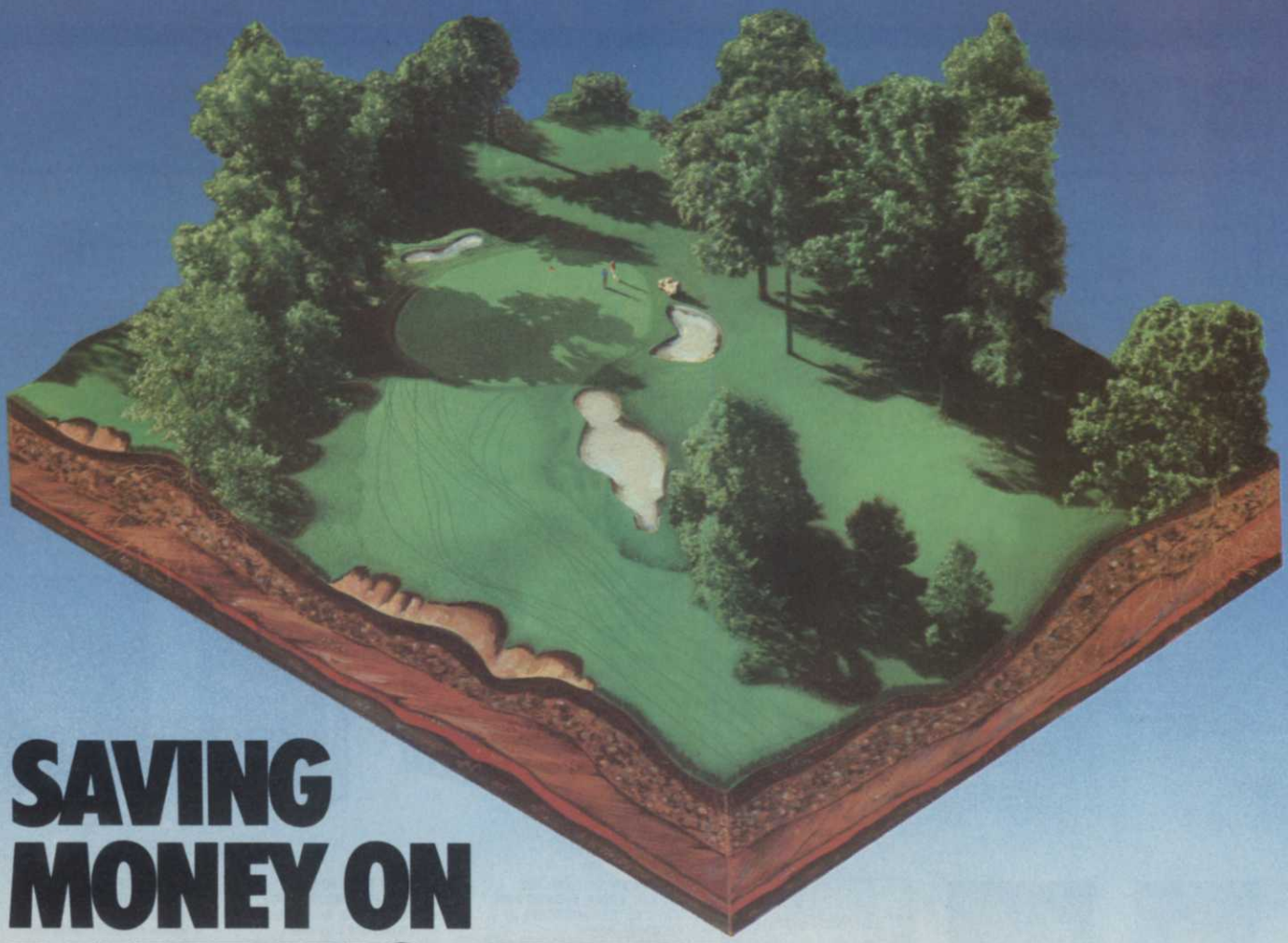
1984 Article Index



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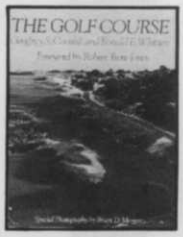

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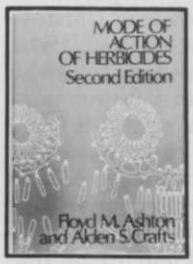

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WTT 84

FINE FESCUES *from page 56*

If a lawn consists primarily of fine fescue it is important to apply an insecticide at the first sign of damaging insect activity. These fescues are tolerant to most commonly used pesticides. No reports of serious injury with judicious pesticide usage have come to my attention.

Special uses

With the advent of improved varieties, use of fine fescues has increased greatly. Sod growers throughout New England have been adding up to 10% Chewings fescue to their Kentucky bluegrass blends. They find that the presence of the fescue widens the adaptation range (sun, shade, poor soils, low maintenance) of their product. Their customers increasingly are requesting sod containing some fine fescue.

Sod growers and users find other values of including fescues as well. Quick seed germination makes fine fescues useful as a nurse grass for other turf species and provides more rapid protection from soil erosion following seeding.

Research at the University of Rhode Island has also shown that sod roots faster after harvest when it contains fine fescue than when it is pure Kentucky bluegrass. This ability can be significant. When establishing research trials with putting green grasses at the Rhode Island Turfgrass Research Farm during the past 10-12 years, we have often seeded Chewings fescue with creeping and velvet bentgrasses.

By seeding one to four pounds of Jamestown Chewings per 1,000 square feet with the usual one pound of bentgrass, we have brought the greens into play faster and have seen no adverse effects.

As the bentgrass develops and matures the fescue slowly disappears. With weak bentgrasses, however, we have found that the fescue can persist even at $^{3}/_{16}$ -$^{1}/_{4}$-inch cut and, in some of our trials, fescue has persisted for over ten years.

The fine fescues, particularly Chewings, are also suggested for emergency seeding of damaged greens. Seeding at the rate of 20 to 25 pounds per 1,000 square feet, in conjunction with a normal rate of a seeded bentgrass, has proven effective. Because of their rapid establishment rate and good, short-term, tolerance to close mowing the fescues have served this purpose well.

Fine fescues have been used for years, often in mixture with perennial ryegrass, for overseeding Bermudagrass putting greens, tees and lawns in the South. Improved cultivars of Chewings fescue have found particular favor and often constitute from 20 to 35 percent of an overseeding mixture with fine-textured, perennial ryegrass. Under dry winter conditions the fescues have made a special contribution. Mixtures of fine fescue and perennial ryegrass are often seeded at rates from 25 to 35 pounds per 1,000 square feet on greens and at 20 pounds on tees and lawns.

Progress has been made in developing fine fescues for turfgrass use. Improved cultivars of Chewings and hard fescue are available from many sources. Although markedly improved creeping or spreading fescues have not been developed, work is in progress and the potential is great.

In summary, fine fescues are a basic component of North American fine turf. Selection and breeding have and will continue to make these among the most versatile and useful of the turfgrasses. **WT&T**

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EVENTS

NOVEMBER

Professional Lawn Care Association of America Conference, Nov. 12-15, Curtiss Hixson Convention Center, Tampa, FL. Contact Jim Brooks, PLCAA, 1225 Johnson Ferry Rd., N.E., Marietta, GA 30067. (404) 977-5222.

National Society of Landscape Architects 84th Annual Meeting, Nov. 17-20, Civic Plaza, Phoenix, AZ. Contact Gail Reuter, 1733 Connecticut Ave., N.W., Washington, D.C. 20009. (202) 466-7730.

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DECEMBER

Exterior Landscape Contracting Conference, Dec. 2-5, Denver, CO. Contact Associated Landscape Contractors of America, 405 N. Washington St., Falls Church, VA 22046. (703) 241-4004.

Ohio Turfgrass Conference, Dec. 3-6, Ohio Center, Hyatt-Regency, Columbus, OH. Contact John Street, Ohio Turfgrass Foundation, Kottman Hall, Ohio State University, 2021 Coffey Rd., Columbus, OH 43210. (614) 422-2601.

New Jersey Turfgrass Expo, Dec. 3-6, International Hotel, Atlantic City, NJ. Contact Dr. Henry Indyk, Soils and Crops Dept., Cook College, P.O. Box 231, New Brunswick, NJ 08903. (201) 932-9453.

North Central Weed Control Conference, Dec. 4-6, Westin Inn, Winnepeg, Canada. Contact Claude Cruse, 309 W. Clark St., Champaign, IL, 61820.

North Central Turfgrass Exposition, Dec. 11-13, O'Hare Exposition Center, Rosemont, IL. Contact Office of Continuing Education, University of Illinois, 725 S. Wright St., Champaign, IL 61820. (217) 333-2882.

Texas Turfgrass Conference and Show, Dec. 10-12, San Antonio Convention Center and Hilton Palacio Del Rio, San Antonio, TX. Contact Texas Turfgrass Association, 3606 Meadow Oaks, Bryan, TX 77802.

Pennsylvania Turfgrass Conference, Dec. 17-20, Hershey, PA. Contact Pennsylvania Turfgrass Council, 412 Blanchard St., Bellefonte, PA 16823. (814) 355-8010.

JANUARY

Associated Landscape Contractors of America Convention and Trade Show, Jan. 20-24, Kona Surf Resort, Kailua, Kona, HI. Contact ALCA, 405 N. Washington St., Falls Church, VA, 22046. (703) 241-4004.

New Hampshire Turfgrass Conference, Jan. 10-11, Center of New Hampshire, Manchester, NH. Contact John Roberts, Plant Science Dept., Nesmith Hall, University of New Hampshire, Durham, NH 03824. (603) 862-1200.

FEBRUARY

Golf Course Superintendents Association of America Show, Feb. 5-12, Washington, D.C. Contact GCSAA, 1617 St. Andrews Drive., Lawrence, KS, 66044. (913) 841-2240.

Midwestern Chapter, International Society of Arboriculture, joint meeting with Nebraska Arborists Assoc. Feb. 27-March 1, New Towner Inn, Omaha, NB. Contact James Rocca, Secty-Treasurer, c/o Conservation Department, PO Box 180, Jefferson City, MO 65102. (314) 751-4115.

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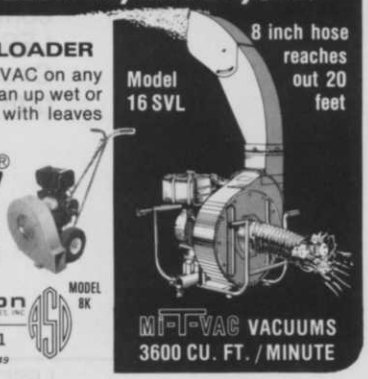

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ADVERTISER INDEX

NO.	ADVERTISER	PAGE
101	Advanced Drainage Systems, Inc.	15
242	American Cyanamid	46-47
	ASPA	37
102	Atwater Strong	94
103	Briggs & Stratton	4-5
104	Brouwer Turf Equip. LTD	CV3
105	Bunton Co.	50-51
106	Cushman	34-35
107	John Deere & Co.	7-12
108	Dow Chemical U.S.A.	CV2-p.1
109	Dupont-Landscape Fabric	41
110	Estech, Inc.	63
111	Estech, Inc.	16
112	Excel	36
239	E-Z-Go	61
114	Franklin Electric Co.	89
115	Glenmac, Inc.	94
162	Gravely International	59
116	Hahn, Inc.	67
117	Hoffco, Inc.	14
275	Howard Price Turf Equip.	65
119	I.C.I. Americas, Inc.	69
120	F.D. Kees	92
121	Lacebark Publications	86
122	Lebanon Chemical Corp.	70
123	Lebanon Chemical Corp.	88
124	Lesco, Inc.	25
	Lesco, Inc.	93
254	Locke Mfg.	43
256	Lofts Seed Co.	CV4
128	Mallinckrodt, Inc.	83
129	Melroe Company	33
130	Midmark	71
133	Midmark	71
131	Milliken Chemicals	73
132	Morbark Industries	23
161	National Mower, Co.	74
	Ohio Turfgrass	77
134	Olathe Mfg., Co.	94
135	Oregon Fine Fescue	57
240	Perfco	85
137	Pickseed West, Inc.	56
241	Ransomes, Inc.	86-87
139	Scag Power Equip.	22
250	O.M. Scott & Sons	3
141	Spraying Systems, Inc.	78
142	Stauffer Chemical Co.	31
144	Stihl, Inc.	56
145	Tee-2-Green Corp.	79
	Terrain Vehicle, Inc. (regional)	95
147	Turfco Mfg., Inc.	62
148	Trebor Corp.	78
149	Toro Co.	54-55
150	Toro Irrigation	17
151	Turf-Seed, Inc.	53
152	Union Carbide Corp.	26-27
249	United Agri. Products	29
154	Vermeer Mfg., Co.	18
155	Vermeer Mfg., Co.	21
156	Vermeer Mfg., Co.	21
157	Vermeer Mfg., Co.	21
158	Vermeer Mfg., Co.	21
159	Vermeer Mfg., Co.	21
160	Weather-Matic	75

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Statement required by the Act of October 23, 1962, Section 3685, Title 39, United States Code, showing the ownership, management and circulation of WEEDS, TREES AND TURF published monthly at One East First Street, Duluth, St. Louis County, Minnesota 55802, as filed September 25, 1984.

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I certify that the statements made by me above are correct and complete.

(Signed)
Joe Bilderbach,
Vice President/Circulation.

OUTLOOK

The Repackaging of Lawn Care

The original success of professional lawn care was packaging. Technology, clearly different from what homeowners used, was developed and vigorously marketed by a few progressive businessmen.

This package was accepted as unique and, like many new ideas, became contagious to both customers and small businessmen seeking a growth market in which to make their fortunes.

The lawn care package remains successful after 20 years and is predicted to stay that way for at least another 15 years.

But, rather than waiting for the package to get old, a few successful lawn care businessmen are reexamining its contents to either extend its life or to create a new formula.

The most common idea is to make other services available to current lawn care customers. Once a customer gets used to a company, he will be inclined to use it for other needs; such as structural pest control, carpet cleaning, and horticultural jobs like tree care, mowing, dethatching, lawn renovation, and aerification. The term 'full service' is spreading rapidly across the industry.

Those experimenting with repackaging have discovered something critical to success of new services, when you change the name of the company just for a particular service you weaken the connection between the customer and your original good work. Also, the customer wants to write one check to one company, not two or three checks to different companies at the same address.

The investment and energy in repackaging has increased tremendously in the past two years as mid-size lawn care companies do technological battle with Chemlawn. These companies have reached a point where they too can afford Ph.D.s and marketing wizards to explore the limits of lawn care. They are now going directly to chemical and equipment manufacturers to develop new technologies to give them an edge over competitors.

The pot of gold at the end of the rainbow for mid-size companies is to go public. These companies must go public no later than the mid- to late-80's while the market growth rate is on the way up. If repackaging helps them go public faster, there is virtually no limit to what they will spend to develop new technologies for growth.

The lawn care package is changing. It will be many years before anyone can pin the label 'mature' on the lawn care industry.

Bruce F. Shank

Bruce F. Shank, Executive Editor

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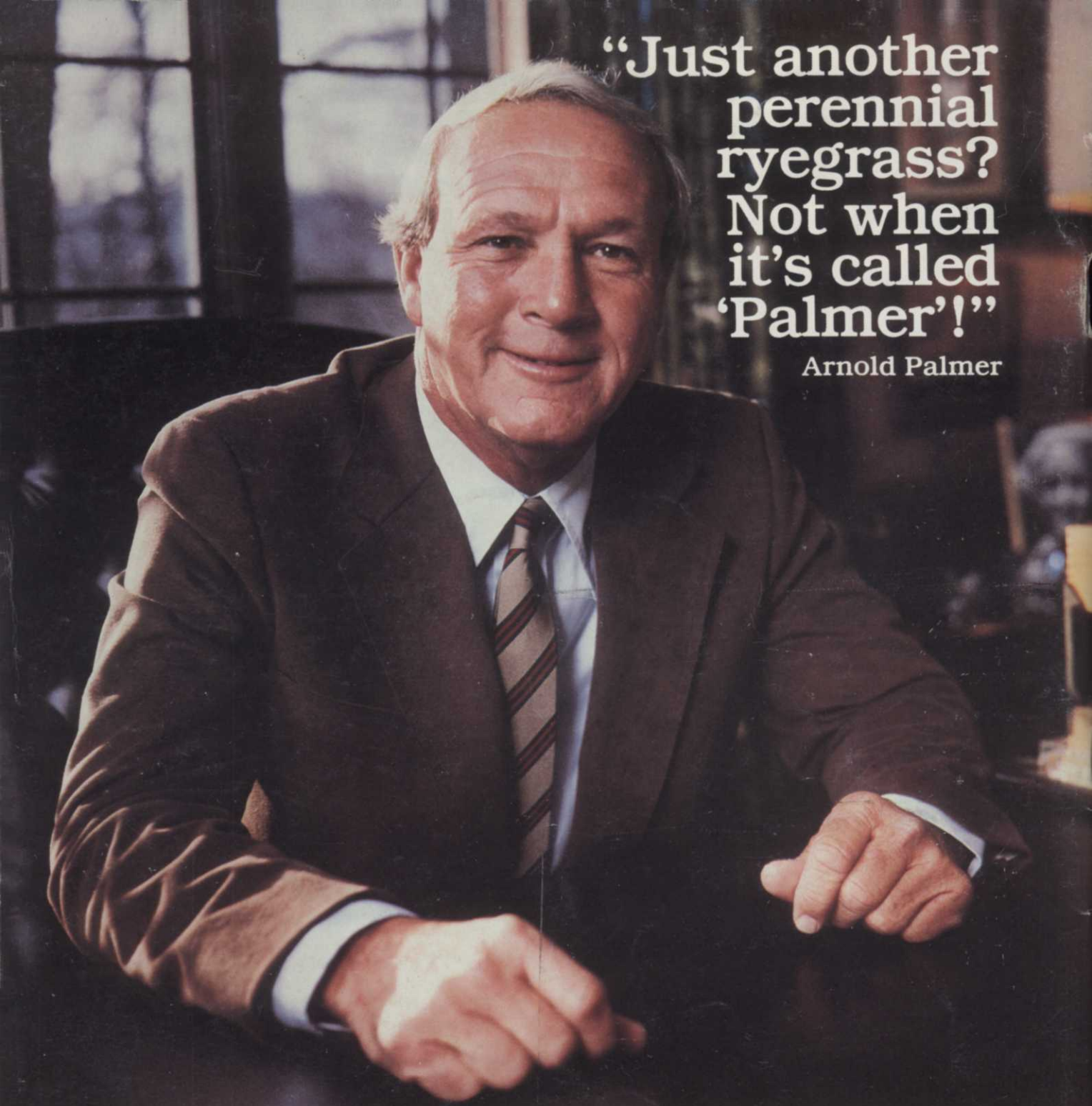

"If a ryegrass is going to be named Palmer, it would have to be very special. And believe me this one is.

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